

# 5 Redundant ThinManager Servers

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## 5.1 Redundancy Overview

ACP uses the term **Failover** to describe having two or more **terminal servers** that the thin clients can connect and run a session from.

ACP uses the term **Redundancy** to describe having two or more **ThinManager Servers** that the thin clients can connect and receive a configuration from.

ThinManager can be installed in three modes:

- Single ThinManager Server
- Full Redundancy
- Mirrored Redundancy

**Single ThinManager Server – No Redundancy:** A system with a single ThinManager Server will have all the terminals boot from that computer, receive their configuration, and then connect to the assigned terminal servers. If the ThinManager Server fails the terminals will continue to function as designed because they hold their configuration in memory. If the terminal reboots it will be unable to connect to the failed ThinManager Server and will not receive their configuration or connect to a terminal server until the ThinManager Server comes back online.

**Full Redundancy – Two ThinManager Servers:** A fully redundant system has two licensed ThinManager Servers that are synchronized with the same configuration on each. The thin clients are configured to boot from either ThinManager Server to receive their configuration. If the primary ThinManager Server fails the terminals will continue to function as designed because they hold their configuration in memory. If the terminal reboots it will be unable to connect to the failed primary ThinManager Server but will switch and boot from the secondary ThinManager Server and will receive the configuration and connect to a terminal server.

**Mirrored Redundancy – Two ThinManager Servers:** This is a form of redundancy that is controlled with a mirrored license. You use two synchronized ThinManager Servers that the terminals can boot from as in a fully redundant system. The difference is that administrative functions like shadowing and configuration changes are limited to the primary ThinManager Server.

Mirrored redundancy is a means to provide a redundant ThinManager Server at a lower cost. It provides a backup ThinManager Server to keep production running until a replacement can be found for the primary ThinManager Server.

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**Note:** All Enterprise licenses include Full Redundancy.

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## 5.1.1 Redundancy Differences

### No Redundancy - Single ThinManager Server

- Least expensive.
- If the ThinManager Server fails the thin clients continue to run from their configuration loaded into RAM.
- If the thin client reboots the thin clients cannot retrieve their configuration until the ThinManager Server is restored.
- The Master License is created with “None” for its redundancy.

### Mirrored Redundancy- Two ThinManager Servers

- Provides redundancy at a lower cost than full redundancy.
- If the ThinManager Server fails the thin clients continue to run from their configuration loaded into RAM.
- Configuration changes can be made only on the primary ThinManager Server. If it fails the thin clients are able to retrieve their configuration from the backup and run as configured. Configuration changes must wait until the primary ThinManager is restored.
- The Master License is created with “Mirrored Redundancy”. It uses Mirrored Terminal Connection Product Licenses.

### Full Redundancy - Two ThinManager Servers

- If the ThinManager Server fails the thin clients continue to run from their configuration loaded into RAM.
- If a ThinManager Server fails, the other ThinManager Server will provide configuration.
- The ThinManager configuration can be changed on either ThinManager Server at anytime.
- Requires a duplicate set of licenses on the backup ThinManager Server.
- The Master License is created with “Full Redundancy”. It uses Redundant Terminal Connection Product Licenses.

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## 5.2 Creating a Redundant Pair of ThinManager Servers

To create a redundant pair of ThinManager Servers:

1. Install ThinManager on two computers. See Standard ThinManager Installation.
2. Configure the thin clients on the primary ThinManager Server. See Terminal Configuration Wizard.
3. Synchronize the two ThinManager Servers. See Synchronize Configuration[Help73].
4. Create a Master License with Full Redundancy and add a Redundant Terminal Connection Product License or add two Terminal Connection Product Licenses and apply one to the Primary ThinManager Server and one to the Secondary ThinManager Server. See ThinManager Licensing for details.
5. Configure the thin clients to boot from two ThinManager Servers using the DHCP server or static IP addressing. See DHCP Server Setup or Configuring New Hardware.

See Licensing ThinManager for details about Redundant License activation.

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## 5.3 Creating Mirrored Redundancy

Mirrored Redundancy provides redundancy at a reduced cost from full redundancy.

To set up Mirrored redundancy:

1. Install ThinManager on two computers. See Standard ThinManager Installation.
2. Synchronize the two ThinManager Server. See Manual Synchronization.
3. Create a Master License with Mirrored Redundancy and add a Mirrored Terminal Connection Product License to the Master License. See ThinManager Licensing for details
4. Configure the thin clients on the primary ThinManager Server. The configurations will be transferred to the secondary ThinManager Server. See Terminal Configuration Wizard.
5. Configure the thin clients to boot from two ThinManager Server using the DHCP server or static IP addressing. See DHCP Server Setup or Configuring New Hardware.

Administrative functions like changing configuration or shadowing can be only performed on the primary ThinManager Server. If the primary fails the thin clients will continue running from their configuration stored in memory. If they reboot they are able to retrieve their configuration from the backup and run as configured. Configuration changes must wait until the primary ThinManager is restored.