

# White Paper



## Thin Clients or Fat Clients?

*Making the Right Decision for Your  
Organization*

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Thin Clients or Fat Clients? .....	1
Motivations for Migrating to Thin Client .....	2
Security and Compliance .....	2
Application Control .....	4
Operating System Control.....	5
Manageability .....	5
Hardware Life .....	5
Challenges of Thin Client Environments.....	6
New Platforms .....	6
Limited Functionality and Flexibility .....	6
Non-Commodity Hardware .....	7
Management Issues.....	7
Achieving the Advantages of Thin Client in a Full Client Environment .....	9
Managing a Thin Client Environment .....	10
Summary .....	11

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## Thin Clients or Fat Clients?

### *Making the Right Decision for Your Organization*

Effectively managing information technology (IT) inevitably entails tradeoffs. For years, full client PCs have been the first choice for deploying a wide array of applications and services. Full client (also known as “fat” client) devices are flexible, computationally capable, and add to the resiliency of distributed systems. However, they have become the target of innumerable viruses, worms, and other malware attacks; the source of information leaks; and require considerable effort and organizational discipline to centrally control and maintain. Many organizations are now considering the benefits of thin client technologies to address some of the challenges they face with full clients.

Thin clients are computers that depend on servers for storage and most services. Thin clients typically do not have disk drives, USB devices, or other persistent storage that could store or introduce malware. Because their operating systems are available from a shared, centrally managed server, there are few pieces of software to manage. These factors reduce security risks and can improve some aspects of manageability. As with any technology, there are drawbacks. Thin clients are highly dependent on network performance and centralized servers that can introduce a potential single point of failure, and thin clients aren’t feasible for some types of workers, such as mobile employees. Thin clients and traditional client computers each have their own strengths and weaknesses for specific applications. Whichever solution matches your particular needs, Altiris provides a comprehensive set of tools to make managing your infrastructure easier and more efficient.

The objective of this white paper is to examine advantages and disadvantages of both full client and thin client architectures and discuss best practices for realizing the benefits of both while minimizing the risks of each. The paper begins with an overview of the motivations for migrating to thin clients, followed by a frank assessment of the drawbacks of that model. The discussion then turns to best practices for achieving the benefits of thin client architectures in a full client environment. For those who find that the thin client model is a better solution for their particular needs, the final section describes techniques for effectively managing a thin client environment.

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## Motivations for Migrating to Thin Client

Centralized computing, typified by the thin client model, is a well-established architecture. Early computing was highly centralized with the use of mainframes and dedicated terminals. The advent of mini-computers in the 1970s introduced department-level computing, but it was not until the 1980s when personal computers set the stage for the beginnings of client/server computing.

The ability to share the processing load between specialized servers and general-purpose PCs enabled the development of new types of applications. Servers, for example, could be configured for high-performance database services, while the full client PCs could manage graphics-intensive user interfaces (UIs).

This flexibility, however, introduced new demands on the IT professionals responsible for managing assets:

- Operating system and application patch management
- More complex release management
- Additional security vulnerabilities and associated threats
- More difficult resource utilization and optimization

The IT industry responded with two broad solutions to these difficulties: thin client computing and centralized management tools. Both of these addressed several key challenges: security and compliance, application control, operating system control, manageability, and hardware life span.

### ***Security and Compliance***

The goal of information security practices traditionally is to protect the confidentiality, integrity, and availability of data and applications. More recently, it has also taken on important roles in maintaining compliance with government regulations, especially with regard to privacy and business information integrity.