

# Xcontrol Mobile Entertainment Content Protection

## Objective

The mobile entertainment solution distributes written content, video and audio over a wireless infrastructure. The targeted devices are brought by the guest, and can be PCs or Macintosh computers, Tablet PC with Apple IOS or Android OS.



The main challenge was to distribute video-on-demand for a wide range of devices to access the protected content.

Because there is no unique protection mechanism for all devices and operating systems, the system implements three main content protection mechanisms: Microsoft Play Ready, Adobe Flash Access and Protected HTTP Live Streaming.

All video content is delivered via Adaptive Streaming, HTTP Live Streaming or Dynamic Streaming.

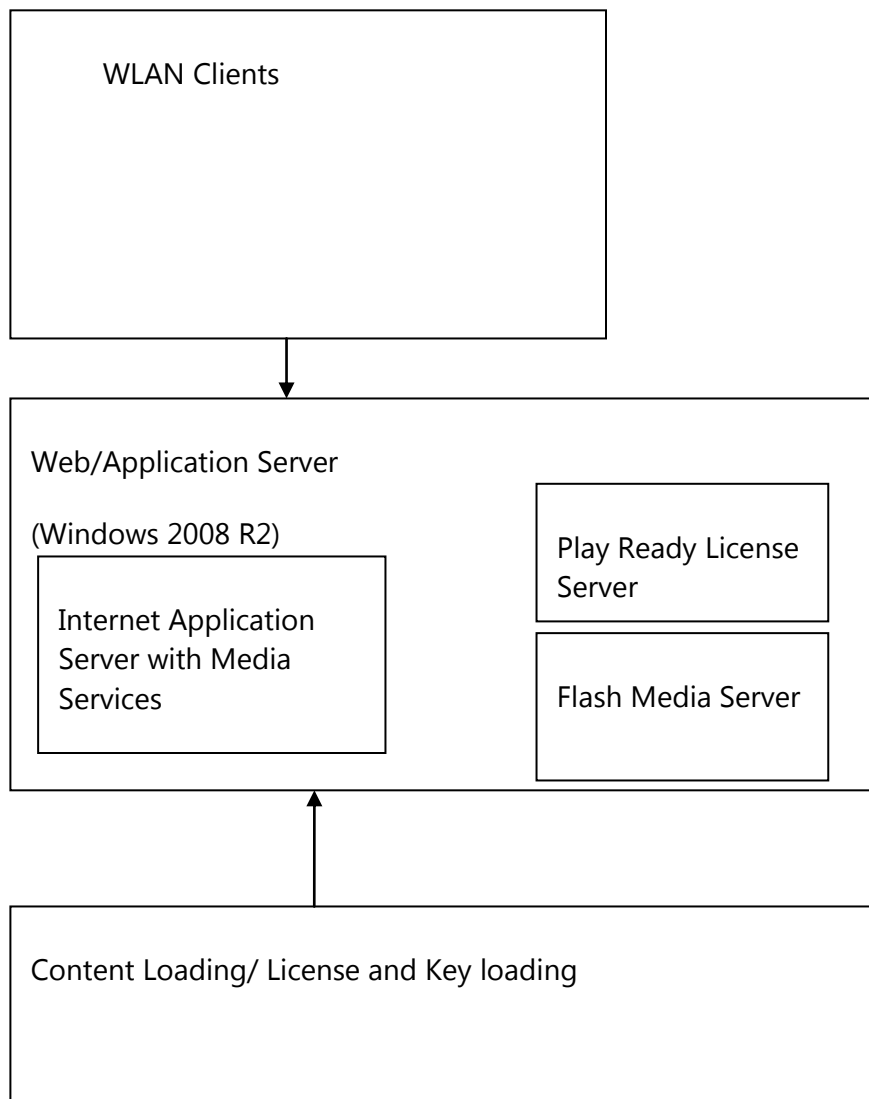


The main clients for this product are Airlines, Hotel Operators and Audio/Video Content Publishers.

Xcontrol provides the development and the hosting of clients specific solutions.

## Infrastructure setup

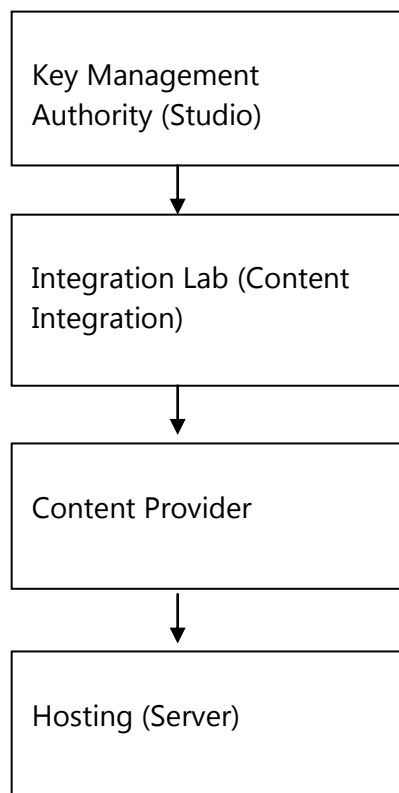
The basic setup of the streaming server is based on Windows 2008 R2 with IIS 7.5 Media services and a Play Ready License server. Flash Media Server 4.5 from Adobe is utilized for the flash streaming.



## Content loading and unloading

The secure loading of the content to the system assures that the content cannot be downloaded in an unencrypted state in the content delivery chain.

On the server, the keys are kept in the PlayReady License server or Flash Media Server Database.



## Content protection

Depending on the device and the installed software, the system uses different technologies to protect the content. The system can handle the following scenarios:

1. Windows-Macintosh with DRM-activated Silverlight (PlayReady)

The PlayReady logo is displayed on a dark blue rectangular background. The text "PlayReady®" is in white, with the registered trademark symbol.

2. Flash installed on Windows, Macintosh, Android (Flash Access)



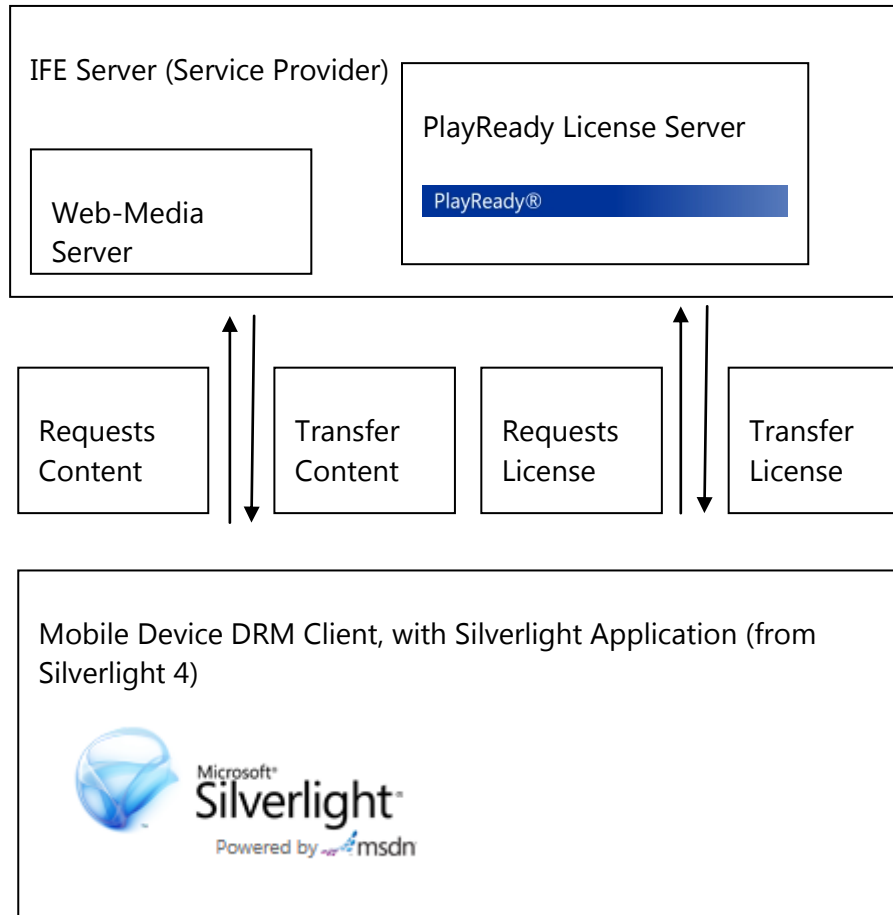
3. IOS Devices with Protected HTTP Live Streaming

Xcontrol is an Apple partner in the Made for iPhone and iPad program.



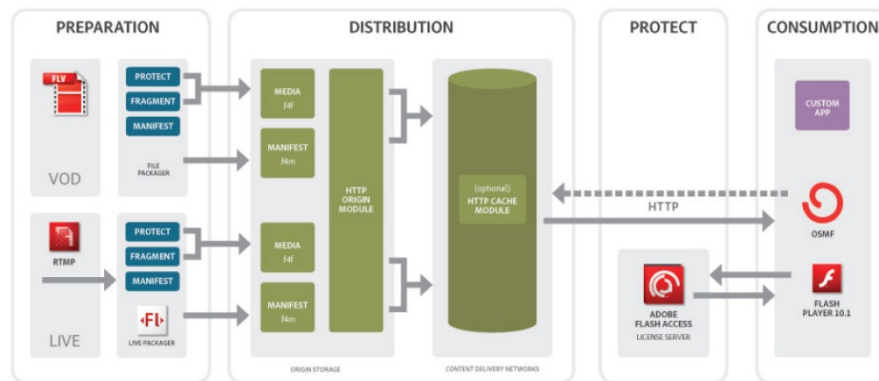
## PlayReady on Silverlight enabled devices

Silverlight runs on all Windows and Macintosh PCs. It can be installed as a Plugin for all major browsers and is Microsoft's standard platform for delivering Play Ready content.



## Adobe Media Server with Flash Access 3.0

Mainly for Android devices, the Flash Player is the right choice to protect content, because the flash player is installed or can be installed on a wide range of devices.



The content is delivered via Protected HTTP Dynamic Streaming.

### 4.3 Apple Protected HTTP Live Streaming

Flash Media Server 4.5 serves protected content over HTTP to devices that support Apple HTTP Live Streaming. This feature is called Protected HTTP Live Streaming (PHLS) and it provides real-time AES-128 wire encryption.

The Flash Media Server installer generates the required certificates and keys. To generate new keys, the scramble tool is used.





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