



Digital Publishing Security Issues

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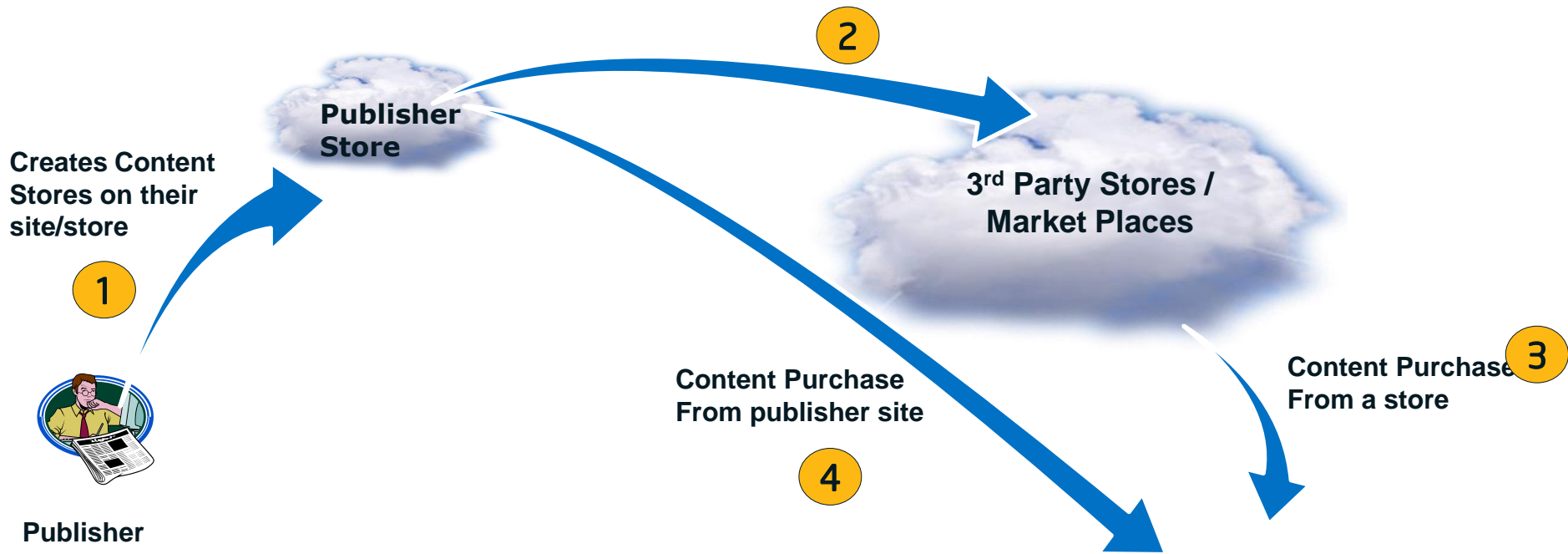
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Digital Books

Digital books provide several benefits over paper book. Few examples:

- Lower cost to produce
- Produce once, use/distribute multiple time
- Portability
- Richer content
- Easy to distribute
- Ease-of-use
- Easy to modify and produce updated editions
- However, Digital books pose several challenges and issues

Digital Content Distribution System



1. Publishers create their content
2. Publishers provide their content to 3rd party Stores or Market Place
3. Users buy content from 3rd party Stores or Market Place
4. Users buy content from Publishers site

Publishers Related Security Issues

- **During content development:**
 - Making sure to use a proper security / encryption technology
- **Right Management:**
 - Multiple Right management solutions exist each with its own strengths and weaknesses. No common Security Solution for future textbook formats. Existing Security Solution solutions may not be sufficient for future e-textbooks.
- **Transmission/Distribution:**
 - Making sure the digital content is securely transmitted and not tampered with or snooped during transmission from
 - Publishers site to Publisher Cloud / Store front
 - From Publisher Store front to user devices
 - Publishers site to 3rd Party stores / Market Place
 - From 3rd Party stores / Market Place to user devices

Client Side issues

Encryption on Device

- Making sure that Digital Books are always encrypted on user devices
- Digital Books are decrypted only while being used

Securing the License / Encryption Key on device

- Need to make sure that the license / keys for decryption the content is protected on user's device
- Someone can compromise the key

Access Control:

- Enforcing publishers policy e.g., cut & paste, enable/disable printing
- Limiting the number of devices content can be opened on

Interoperability Issues:

- How to play Content from different publishers using different security technologies

Un-authorized Copy and Distribution

Offline Consumption:

- Paid e-book should be allowed to store on local storage for off-line reading/consumption
- This opens up issue of Copy and un-authorized distribution:

Un-authorized access: since the digital content is stored on local device, it can be easily copied and distributed. Although, there are security solutions to prevent un-authorized copies, however, existing solutions can be easily circumvented.

Browsers Support for Digital books

- Digital content can also be consumed from publisher's website via a browser without downloading onto a local device

Issues:

- Protecting content while viewed through a browser
- Supporting multiple formats like ePub, HTML5 etc. through browser
- Providing Plug-Ins which can use HW protection

Next Steps

- Please provide your input
- Develop detailed security Use Cases
 - For future digital content
 - Focusing on issues that are missing from current existing solution
- Include Privacy issues
- Present findings/use cases back to this group