



Software Deployment Strategy

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Version 1.0.0

Common Question on deployment

- Where to publish the solution?
- What configuration or code changes that needed before deployment?
- How to validate the deployment result?
- How to migrate the existing data to the new solution?
- How to train the user?
- How to make the application sustain?

Where to publish

Online

- On-Premise
- On-Cloud

Offline

- Mobile
- Workstation

What elements that need to deploy

Assemblies

Dependent
Assemblies

Files and
Folder

Scripts

Serviced
Components

Assemblies concept

- Assembly: An unit deployment, it can be executable, script files, or dynamic library (dll)
- Assembly types
 - Private Assembly
 - Shared Assembly

Assembly Readiness

- Signed It!
 - Digital Certificate
 - MD5 Hash
 - Obfuscate
- Benefits of Signing activity
 - Guaranteed uniqueness name
 - Guaranteed lineage of version
 - Guaranteed temper free
 - Side-by-Side deployment

Assembly Readiness

- **Testing It**
 - **Development Environment**
 - Sample Configuration
 - Sample Data
 - Sample Infrastructure
 - **Staging Environment**
 - Real Configuration
 - Sample Data
 - Real Infrastructures
 - **Production environment**
 - Real configuration
 - Real Data
 - Real Infrastructures

Dependent Assembly

- An assembly that needed to make the app running
- An assembly that needed to reconfigure before the deployment
- Dependent assembly
 - Runtime Environment (i.e. .NET, Java)
 - Reference from A Product (i.e. depend on Adobe PDF)
 - Reference from Third Party Component (i.e. depend on Adobe Flash, JQuery)

Common Technology to deploy

• X-Copy (Traditional Copy-Paste)

Copy-Paste the App

Pros

- Simple and Portable
- The best for utility app

Cons

- No Start Menu / Shortcut
- Security
- Limited Configuration

Common Technology to deploy

• Installer

Using installation engine (MSI, Install4J, InstallShield, SFX)

Pros

- Graphical user interface and wizard
- Add-Remove consistent way
- Transaction Mode
- Silent or Interactive Mode

Cons

- Size

Common Technology to deploy

• Zero Touch / Automatic Installation

Installation experience with internet related feature (Java Web Start, Click Once)

Pros

- Automatic Update
- Target system impact
- Installer permission

Cons

- Network dependent
- Untouch with the system component
- Slow at First



DEMO

Deploying Solution

Staging to Production Deployment
Solution

How to validate the deployment result

Tester do User
Acceptance
Test

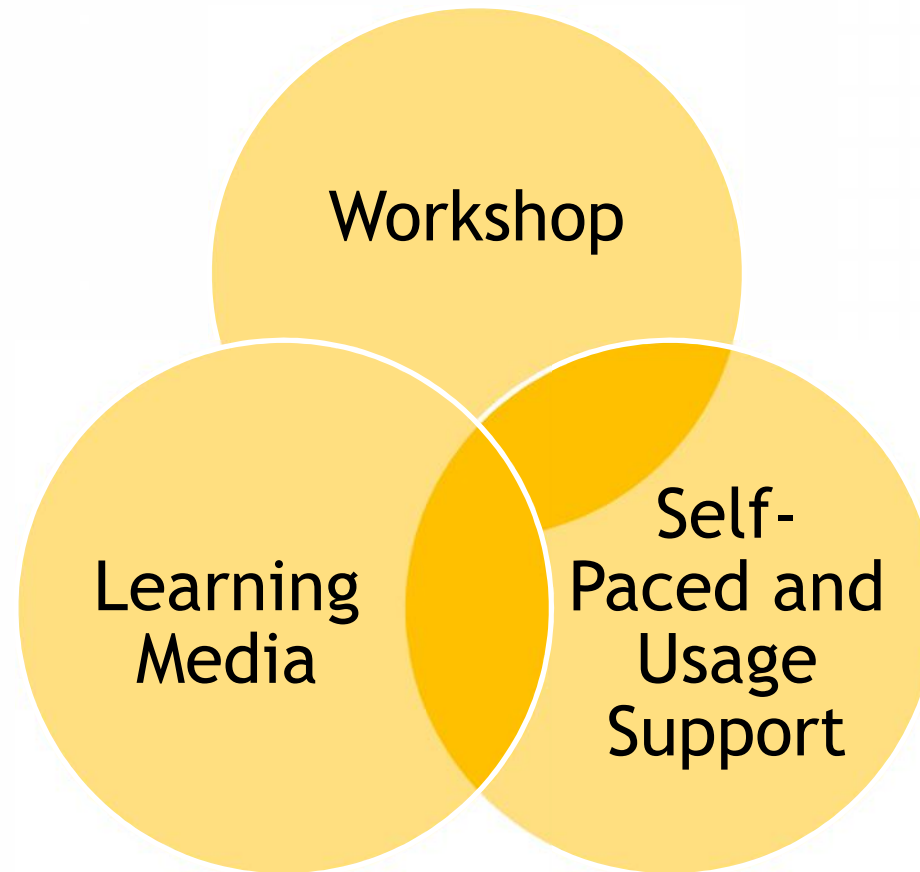
User do User
Acceptance
Test

User do
Usability Test

How to migrate existing data

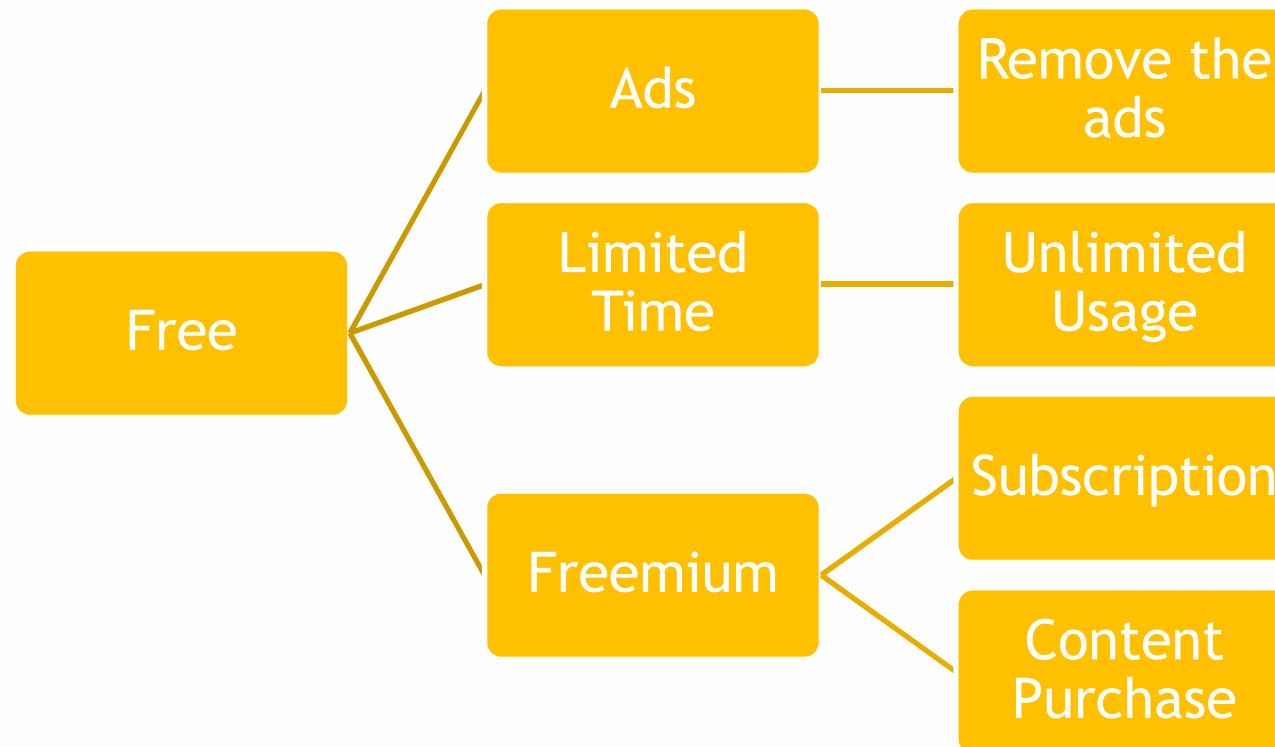
- **Backward Compatible**
 - The solution should support legacy data
- **Import and Export Model**
 - The solution should have feature to import the legacy data
- **Data Upgrading**
 - The data should be upgraded before the solution is activated

How to train the user



How to make application sustain

- Making sure the user uses the software
- Making sure the financial matters is supported by the client / user



Others Sustainability

- Open Source Sponsorship
- Data Selling and Usage
- Research Funds
- Patent
- Direct Sales to Vertical Organization

Key points

- Deployment covers
 - Infrastructure Changes
 - Configuration Changes
 - Data Changes
- After Deployment Activities
 - Data Migration
 - User Training
 - Maintenance / Sustainability

References

- Ridi Ferdiana. 2014. Application Lifecycle Management Course Module. MCT Module