manifests

Basic keys/sections

catalogs

catalogs

```xml
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple Computer//DTD PLIST 1.0//EN" "http://www.apple.com
<plist version="1.0">
<dict>
    <key>catalogs</key>
    <array>
        <string>testing</string>
        <string>production</string>
    </array>
    <key>managed_installs</key>
    <array>
        <string>Firefox</string>
        <string>GoogleChrome</string>
    </array>
</dict>
</plist>
```

managed_installs

managed_installs

```xml
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple Computer//DTD PLIST 1.0//EN" "http://www.apple.com
<plist version="1.0">
<dict>
    <key>catalogs</key>
    <array>
        <string>production</string>
    </array>
    <key>managed_installs</key>
    <array>
        <string>Firefox</string>
        <string>GoogleChrome</string>
    </array>
</dict>
</plist>
```

managed_installs

Items that must be installed and must be kept up-to-date.

If an item listed here is not currently installed, Munki will install it.

Items listed here are kept updated automatically.

managed_installs

```xml
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple Computer//D
<plist version="1.0">
<dict>
    <key>catalogs</key>
    <array>
        <string>production</string>
    </array>
    <key>managed_installs</key>
    <array>
        <string>Firefox</string>
        <string>GoogleChrome</string>
    </array>
</dict>
</plist>
```

manifest

```xml
        <string>54.0.2840.87</string>
        <key>CFBundleVersion</key>
        <string>2840.87</string>
        <key>minosversion</key>
        <string>10.9.0</string>
        <key>path</key>
        <string>/Applications/Google Chrome
        <key>type</key>
        <string>application</string>
        <key>version_comparison_key</key>
        <string>CFBundleShortVersionString<
    </dict>
</array>
<key>items_to_copy</key>
<array>
    <dict>
        <key>destination_path</key>
        <string>/Applications</string>
        <key>source_item</key>
        <string>Google Chrome.app</string>
    </dict>
</array>
<key>minimum_os_version</key>
<string>10.9.0</string>
<key>name</key>
<string>GoogleChrome</string>
<key>unattended_install</key>
<true/>
<key>uninstall_method</key>
<string>remove_copied_items</string>
<key>uninstallable</key>
<true/>
<key>version</key>
<string>54.0.2840.87</string>
</dict>
</plist>
```

pkginfo

managed_uninstalls

managed_uninstalls

```xml
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple Computer//DTD PLIST 1.0//EN" "http://www.apple.com
<plist version="1.0">
<dict>
    <key>catalogs</key>
    <array>
        <string>production</string>
    </array>
    <key>managed_installs</key>
    <array>
        <string>Firefox</string>
        <string>Office2016</string>
    </array>
    <key>managed_uninstalls</key>
    <array>
        <string>Office2011</string>
    </array>
</dict>
</plist>
```

managed_uninstalls

Items that must not be installed (IOW, items you wish to remove).

managed_updates

managed_updates

```xml
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple Computer//DTD PLIST 1.0//EN" "http://www.apple.com
<plist version="1.0">
<dict>
    <key>catalogs</key>
    <array>
        <string>production</string>
    </array>
    <key>managed_installs</key>
    <array>
        <string>Firefox</string>
        <string>Office2016</string>
    </array>
    <key>managed_updates</key>
    <array>
        <string>FlashPlayer</string>
    </array>
</dict>
</plist>
```

managed_updates

Items that must be kept up-to-date if they are installed.

If an item listed here is not currently installed,
Munki will **NOT** install it.

Items listed here are kept updated automatically.

This is **NOT** the place for updates to items in managed_installs

optional_installs

optional_installs

```xml
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple Computer//DTD PLIST 1.0//EN" "http://www.apple.com
<plist version="1.0">
<dict>
    <key>catalogs</key>
    <array>
        <string>production</string>
    </array>
    <key>managed_installs</key>
    <array>
        <string>Firefox</string>
        <string>Office2016</string>
    </array>
    <key>optional_installs</key>
    <array>
        <string>AdobeAcrobatReaderRC</string>
        <string>Skype</string>
    </array>
</dict>
</plist>
```
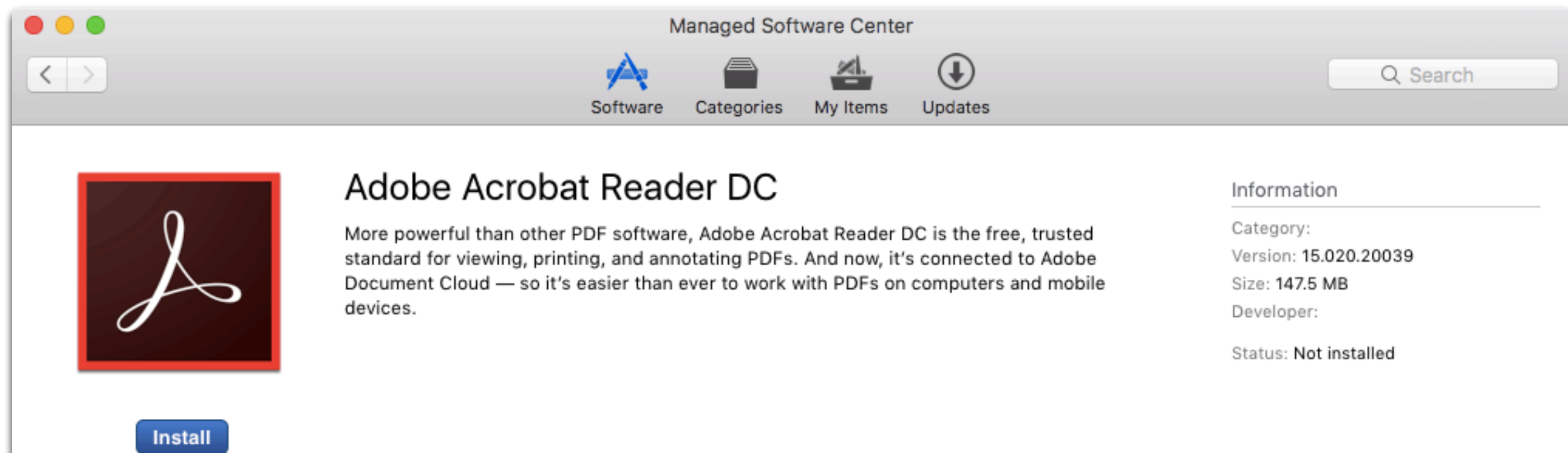
optional_installs

Items to be made available in Managed Software Center for self-service install.

included_manifests

manifest foo

```xml
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple Computer//DTD PLIST 1.0//EN" "http://www.apple.com
<plist version="1.0">
<dict>
    <key>catalogs</key>
    <array>
        <string>production</string>
    </array>
    <key>managed_installs</key>
    <array>
        <string>Firefox</string>
        <string>GoogleChrome</string>
        <string>Office2016</string>
        <string>Skype</string>
        <string>Slack</string>
        <string>VLC</string>
    </array>
</dict>
</plist>
```

manifest bar

```xml
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple Computer//DTD PLIST 1.0//EN" "http://www.apple.com
<plist version="1.0">
<dict>
    <key>catalogs</key>
    <array>
        <string>production</string>
    </array>
    <key>managed_installs</key>
    <array>
        <string>Firefox</string>
        <string>GoogleChrome</string>
        <string>Office2016</string>
        <string>Skype</string>
        <string>Slack</string>
        <string>VLC</string>
        <string>AdobePhotoshopCC2017</string>
    </array>
</dict>
</plist>
```

manifest bar

```xml
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple Computer//DTD PLIST 1.0//EN" "http://www.apple.com
<plist version="1.0">
<dict>
    <key>catalogs</key>
    <array>
        <string>production</string>
    </array>
    <key>included_manifests</key>
    <array>
        <string>groups/StandardApplications</string>
    </array>
    <key>managed_installs</key>
    <array>
        <string>AdobePhotoshopCC2017</string>
    </array>
</dict>
</plist>
```

groups/StandardApplications

```xml
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple Computer//DTD PLIST 1.0//EN" "http://www.apple.com
<plist version="1.0">
<dict>
    <key>managed_installs</key>
    <array>
        <string>Firefox</string>
        <string>GoogleChrome</string>
        <string>Office2016</string>
        <string>Skype</string>
        <string>Slack</string>
        <string>VLC</string>
    </array>
</dict>
</plist>
```

groups/StandardConfig

```xml
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple Computer//DTD PLIST 1.0//EN" "http://www.apple.com
<plist version="1.0">
<dict>
    <key>included_manifests</key>
    <array>
        <string>groups/StandardApplications</string>
        <string>groups/StandardPrinterDrivers</string>
        <string>groups/MyOrgAdminTools</string>
        <string>groups/StandardConfigProfiles</string>
    </array>
</dict>
</plist>
```

manifest bar

```xml
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple Computer//DTD PLIST 1.0//EN" "http://www.apple.co
<plist version="1.0">
<dict>
    <key>catalogs</key>
    <array>
        <string>production</string>
    </array>
    <key>included_manifests</key>
    <array>
        <string>groups/StandardConfig</string>
    </array>
    <key>managed_installs</key>
    <array>
        <string>AdobePhotoshopCC2017</string>
    </array>
</dict>
</plist>
```

conditional_items

```
<plist version="1.0">
<dict>
    <key>managed_installs</key>
    <array>
        <string>Firefox</string>
        <string>GoogleChrome</string>
        <string>VPNConfiguration</string>
    </array>
</dict>
</plist>
```

```
<plist version="1.0">
<dict>
    <key>conditional_items</key>
    <array>
        <dict>
            <...>
        </dict>
    </array>
    <key>managed_installs</key>
    <array>
        <string>Firefox</string>
        <string>GoogleChrome</string>
    </array>
</dict>
</plist>
```

```
<dict>
    <key>condition</key>
    <string>machine_type == "laptop"</string>
    <key>managed_installs</key>
    <array>
        <string>VPNConfiguration</string>
    </array>
</dict>
```

```xml
<dict>
    <key>condition</key>
    <string>os_vers_minor &gt; 9</string>
    <key>managed_installs</key>
    <array>
        <string>Office2016</string>
    </array>
    <key>managed_uninstalls</key>
    <array>
        <string>Office2011</string>
    </array>
</dict>
```

Attribute	Example comparison
hostname	hostname == "LobbyiMac"
arch	arch == "x86_64"
os_vers	os_vers BEGINSWITH "10.7"
os_vers_major	os_vers_major == 10
os_vers_minor	os_vers_minor < 7
os_vers_patch	os_vers_patch >= 2
machine_model	machine_model == "iMac4,1"
machine_type	machine_type == "laptop"
catalogs	catalogs CONTAINS "testing"
ipv4_addresses	ANY ipv4_address CONTAINS '192.168.161.'
munki_version	munki_version LIKE '*0.8.3*'
serial_number	serial_number == "W9999999U2P"
date	date > CAST("2013-01-02T00:00:00Z", "NSDate")

https://github.com/munki/munki/wiki/Conditional-Items

Not enough attributes?

Make your own!

Admin-provided conditions

https://github.com/munki/munki/wiki/Conditional-Items#admin-provided-conditions

How a client gets its manifest

If ClientIdentifier is set, request a manifest of that name

```
bash-3.2$ defaults read /Library/Preferences/ManagedInstalls
{
    AppleSoftwareUpdatesOnly = 0;
    ClientIdentifier = "Rydell_HS_Science_Dept";
    DaysBetweenNotifications = 1;
    FollowHTTPRedirects = none;
    InstallAppleSoftwareUpdates = 1;
    InstalledApplePackagesChecksum = d8614e80fd417328443d82eda1be099dc0a2277b1ca424
    LastAppleSoftwareUpdateCheck = "2016-11-10 18:07:18 +0000";
    LastCheckDate = "2016-11-10 22:42:59 +0000";
    LastCheckResult = 0;
    LogFile = "/Library/Managed Installs/Logs/ManagedSoftwareUpdate.log";
    LogToSyslog = 0;
    LoggingLevel = 1;
    MSUDebugLogEnabled = 1;
    MSULogEnabled = 1;
    ManagedInstallDir = "/Library/Managed Installs";
    PackageVerificationMode = hash;
    PendingUpdateCount = 0;
    SoftwareRepoURL = "https://munki.pretendco.com/repo";
    SoftwareUpdateServerURL = "";
    SuppressAutoInstall = 0;
    SuppressStopButtonOnInstall = 0;
    SuppressUserNotification = 0;
    UnattendedAppleUpdates = 1;
    UseClientCertificate = 0;
}
```

How a client gets its manifest

If ClientIdentifier is set, request a manifest of that name

If ClientIdentifier is not set/empty:
- Request a manifest named the same as the fully-qualified hostname of the machine. If that fails:

- Request a manifest named the same as the "short" hostname. If that fails:

- Request a manifest named the same as the serial number of the machine. If that fails:

- Request a manifest named "site_default"

Manifest resolution order

- ClientIdentifier (/Library/Preferences/ManagedInstalls)

- FQDN

- Short hostname

- Serial number

- site_default

manifest strategies

All machines are configured the same:

Use the site_default manifest and leave ClientIdentifier empty

Most machines are configured the same with a few unique machines:

Use the site_default manifest and leave ClientIdentifier empty.
Create manifests named for the serial number or hostname for your unique snowflakes.
Make use of included_manifests for common shared items.

Machines share a common base configuration, but each can be customized (1:1 deployments):

Leave ClientIdentifier empty.
Create manifests named for the serial number or hostname for each machine.
Make use of included_manifests for common shared items.

Different groupings of machines have different configurations

Assign all machines in a group a shared ClientIdentifier.
Create manifests named for each ClientIdentifier.
Make use of included_manifests for common shared items.