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To Bind or not to Bind: A guide in 2020

Session Start Time - End Time *(JNUC team will add this)*

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Johan McGwire

Systems Engineer

Coinbase

Slack - @Yohan

Github - @Yohan460

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To Bind or not to Bind: A guide in 2020

Presentation agenda:

- Define the deployment situations
- Evaluate different identity methods
- Discuss the security implications
- Random Topics
- Assess the transition away from binding

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Preface

- Views are my own
- Opinionated piece
- Very dynamic environment

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Deployment Requirements

1. Automated Device Enrollment
2. Externally Facing MDM
3. Centralized Identity Infrastructure
   - Cloud Identity
   - On Premise Identity

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What Happened at WWDC

- Local accounts strongly recommended
- Leverage identity to your advantage

Sessions

- Leverage enterprise identity and authentication
- Deploy Apple devices using zero-touch

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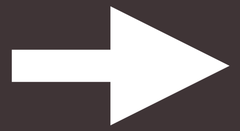
Identity Types

On Premise

- Active Directory
- Open Directory
- LDAP
- etc…



Cloud

- Azure
- Okta
- G Suite
- etc…

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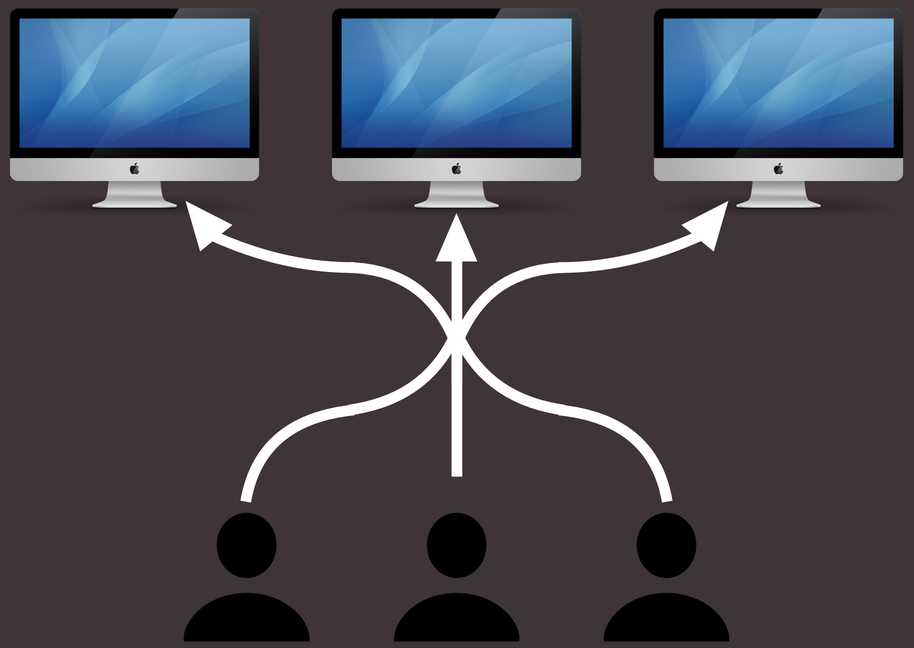
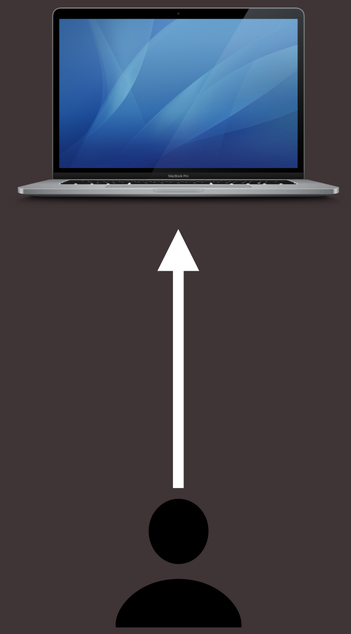
Deployment Scenarios

Many to Many



One to One



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Issues with Traditional Binding

- Keychain synchronization prompts
- Difficult health reporting

Remote Challenges

- FileVault password irrecoverability
- Password Synchronization at login

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Many to Many Options

On Premise idP → Traditional Bind

On Premise idP → NoMAD Login
- Local accounts
- Agent capabilities

Cloud idP → Jamf Connect
- Restrictions per idP
- Local accounts

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Realms of User Creation

Login Window

Traditional Bind

NoMAD Login

Jamf Connect

Etc…

Setup Assistant

Credential Auth

SSO Enrollment Customization

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Setup Assistant vs Login Window

- Authenticate before enrollment
  - No pre-loaded identifiable assets
  - No pre-installed programs
  - No organization specific settings
- Apple supported method

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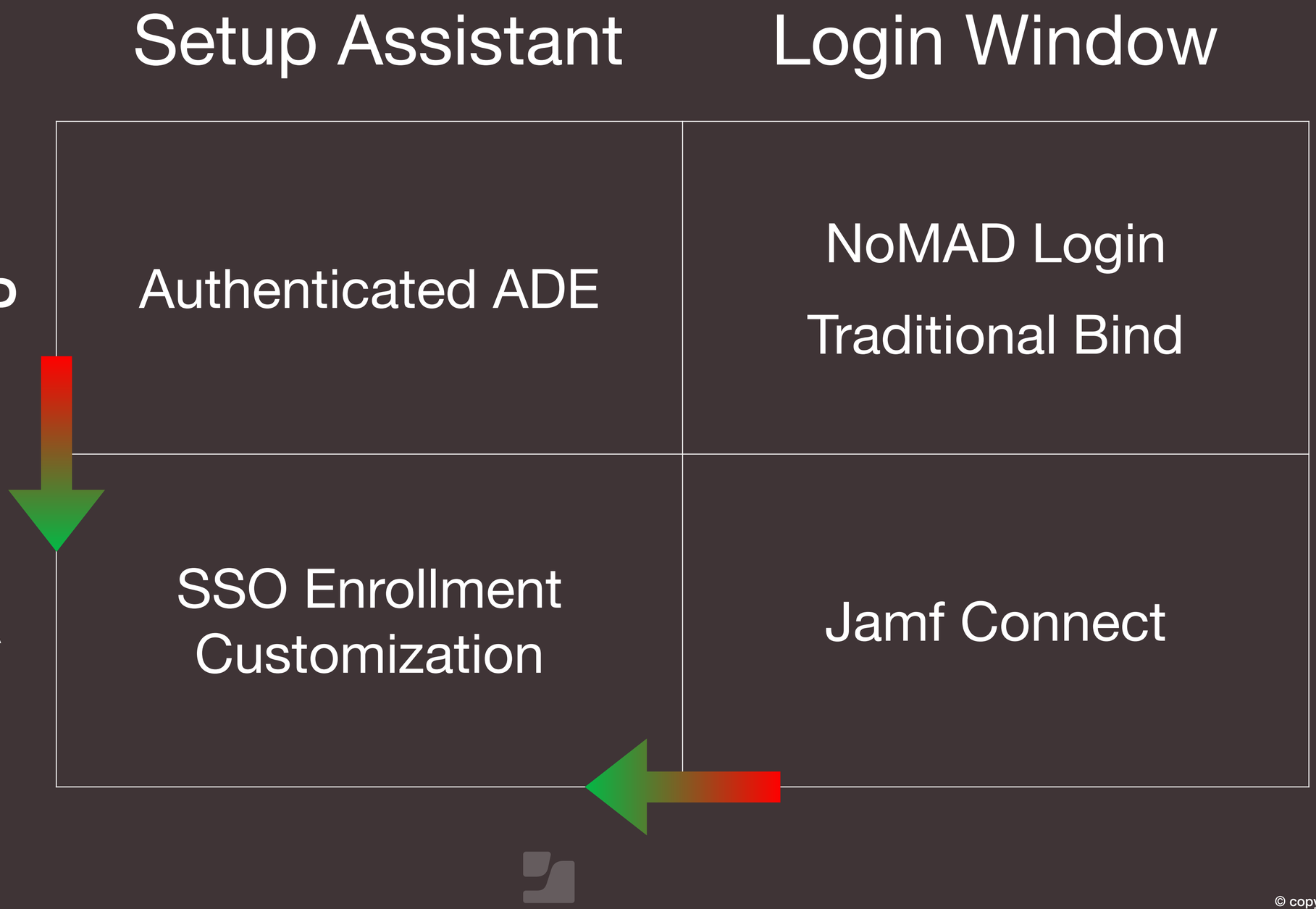

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One to One - Login Window

NoMAD Login & Traditional Bind

- Password sync with on-premise idP
- Requires direct domain connectivity

Jamf Connect

- Password sync
- MFA capability

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One to One - Setup Assistant

Credential Authenticated ADE

- Initial password sync with on-premise idP

SSO Enrollment Customization

- No password sync
- MFA capability

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Password Synchronization

- No direct security benefit
  - Some niche scenarios
- Enforce via MDM configuration profiles
- Password de-sync is more secure
  - Adds another hurdle for attacker

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Binding with Local Accounts

- DFS (Directory File Shares)
- 802.1X Certificates - **Many additional options**
  - Jamf ADCS Connector
  - SCEP Proxy

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FileVault...

- Not advisable in Many to Many scenarios
- FileVault screen =/= Login window
  - Dual auth for LW replacements
    - Disable-able via recovery mode
    - Bad user experience

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Transitioning from the bind

- Scripted per account - **Hard**
- NoMAD Login Mechanism - **Easy**
  - NoLo v1.4
  - Automatic demobilization during login
    - FileVault or LoginWindow
    - SmartCard capabilities

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NoLo Demobilization PostInstall

```
# Insert the Demobilization mechanism
authchanger -reset -demobilize

# Enabling the Demobiliztion
defaults write /Library/Preferences/menu.nomad.login.ad.plist DemobilizeUsers -bool true
```

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Smartcards

- Attribute Mapping predominantly used
  - Tied to unpreserved account attribute
  - Programmatically added for Local accounts
  - Preservation possible with demobilization

NoLo Demobilization PostInstall

```
# Saving the AltSecurityIdentites account attribute
defaults write /Library/Preferences/menu.nomad.login.ad.plist DemobilizeSaveAltSecurityIdentities -bool true
```

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Sources

- NoMAD Login Gitlab
- Apple MDM Guide
- Demobilization Script - rtrouton
- WWDC 2020

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Thank you for listening!

Give us feedback by completing the 2-question session survey in the JNUC 2020 app.

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Session title *(JNUC team will add this)*

Session time (JNUC team will add this)