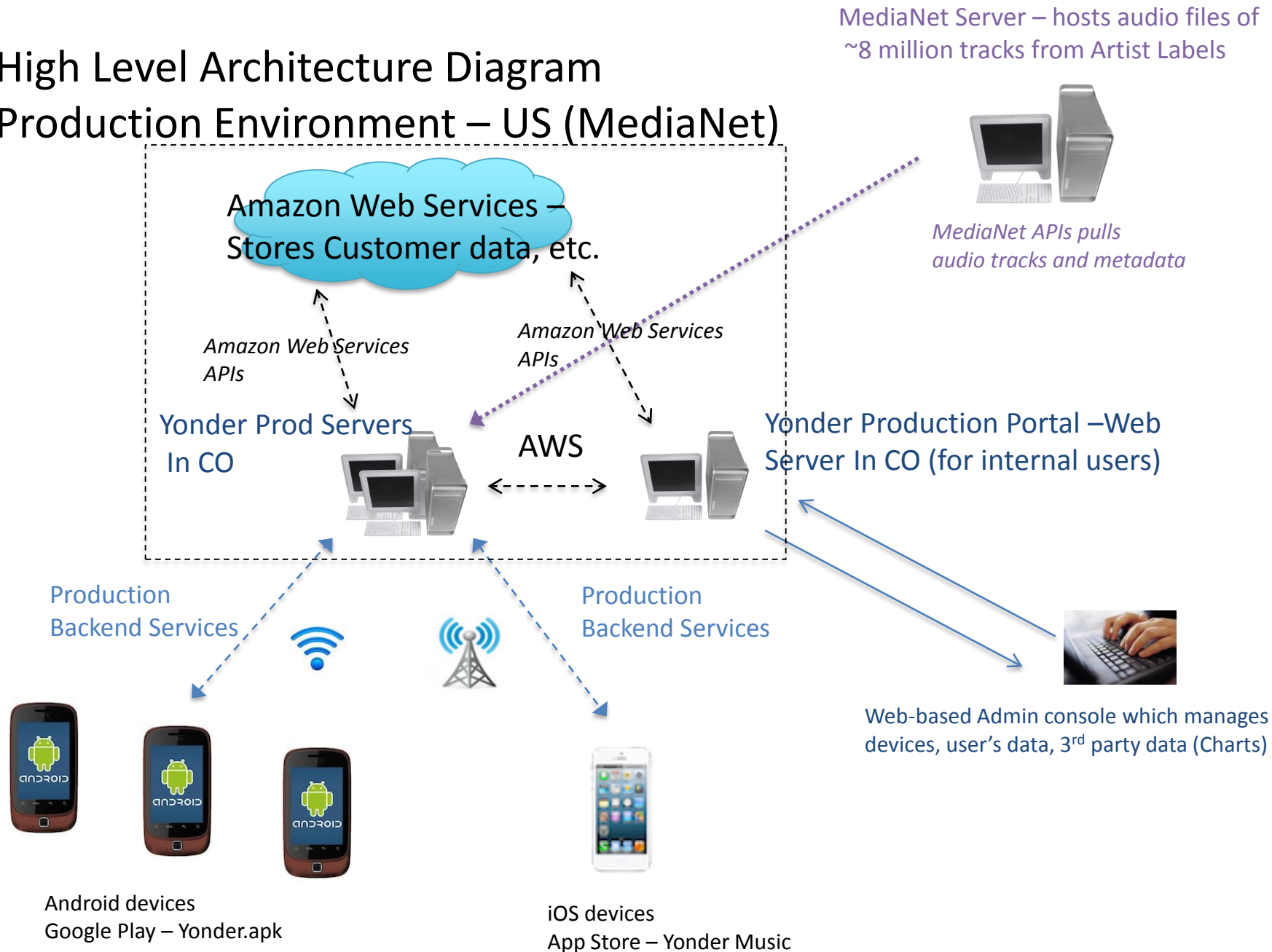


High Level Architecture Diagram

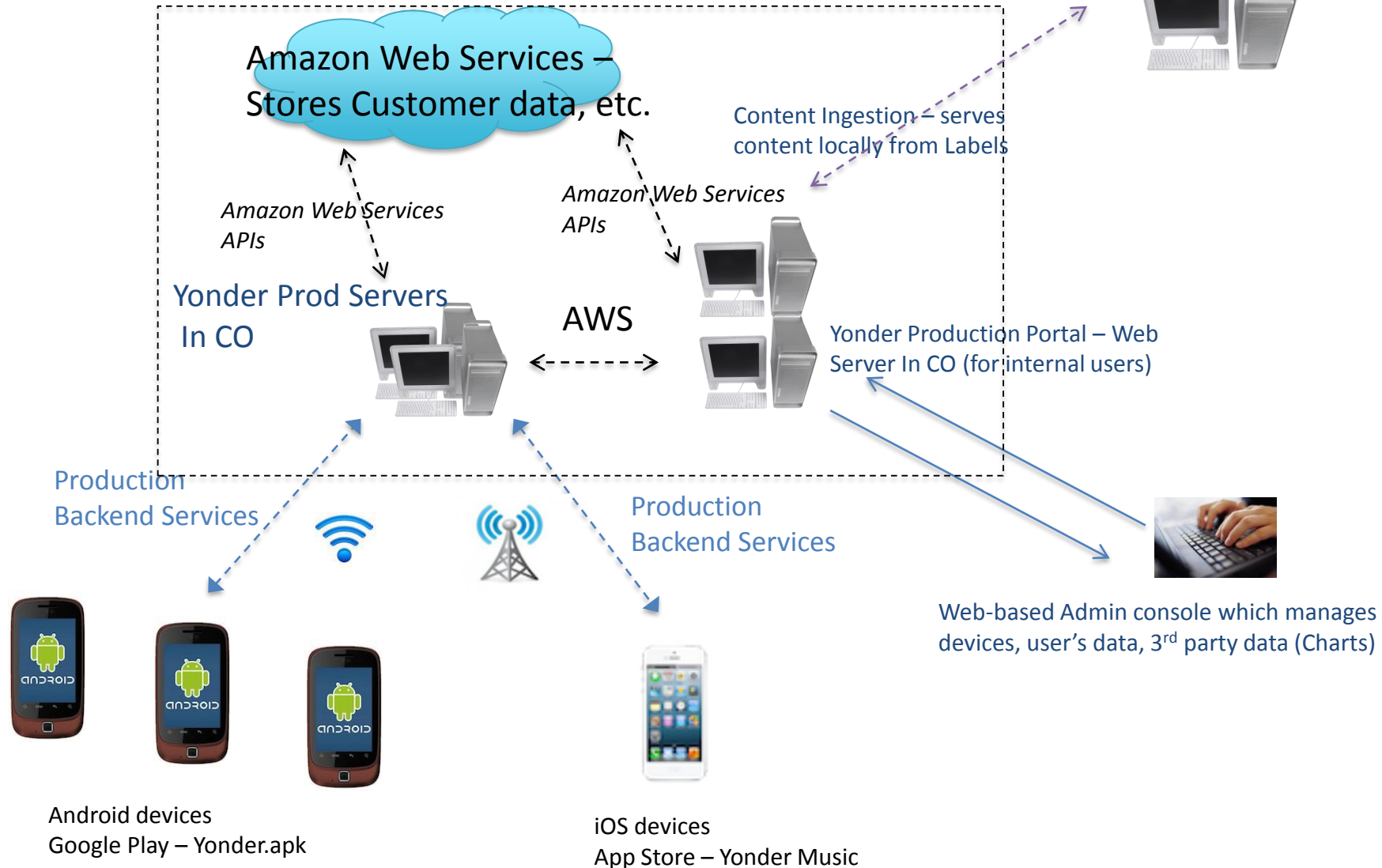
Production Environment – US (MediaNet)



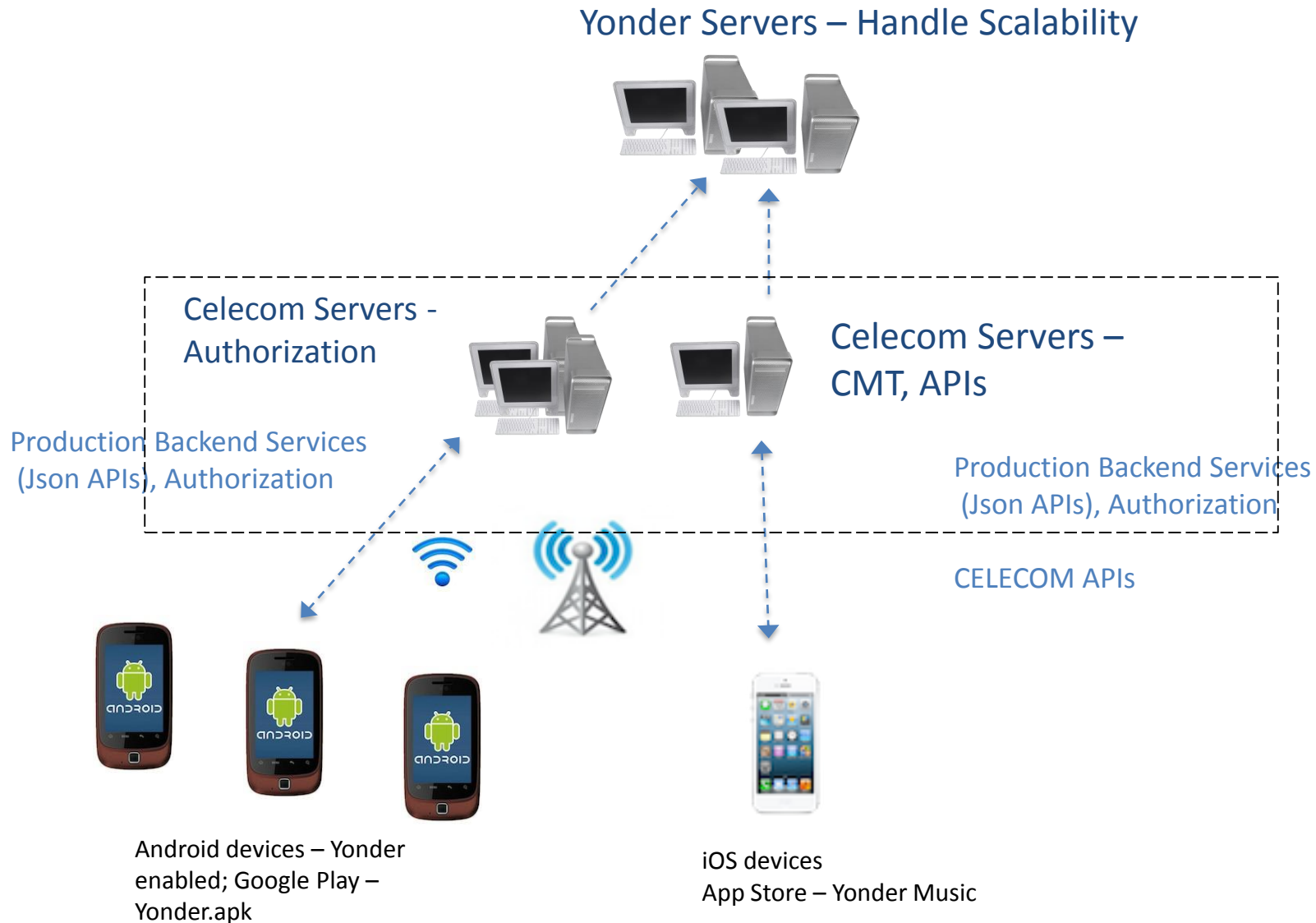
High Level Architecture Diagram

Production Environment – US (Content from Labels)

Labels – Universal, Warner,
pushes content directly to
Yonder Servers

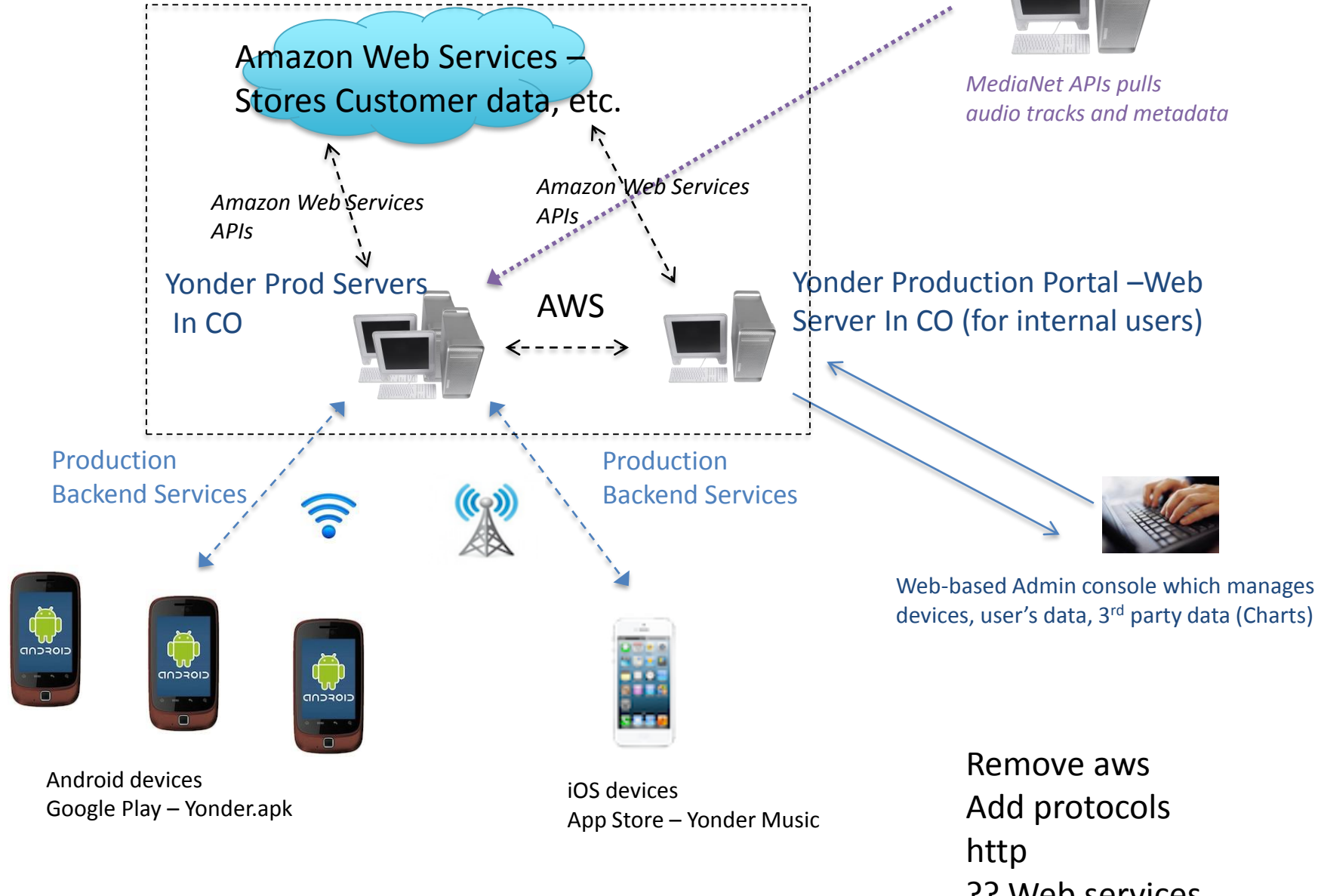


High Level Architecture Diagram Production Environment Celecom Malaysia (WIP)



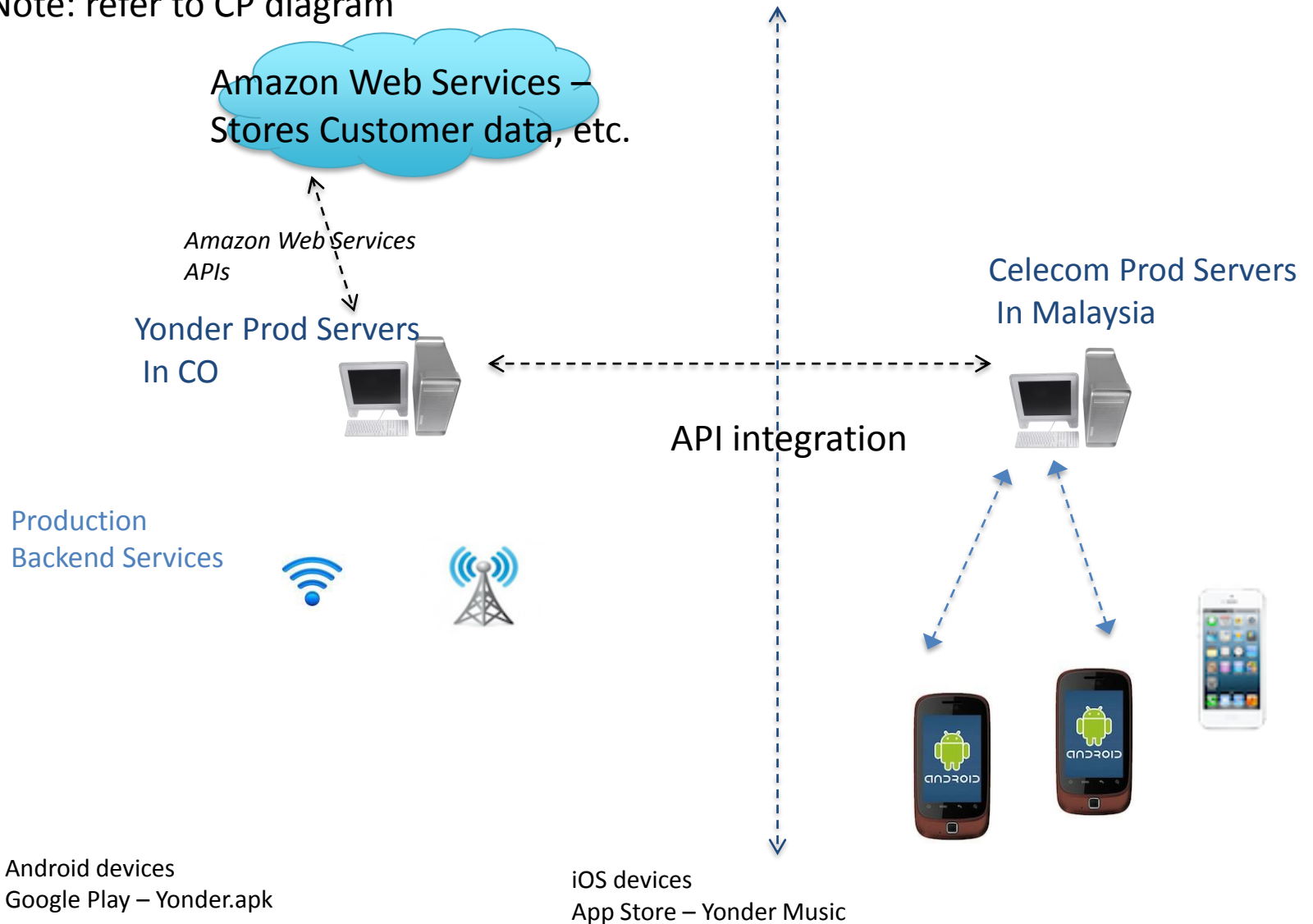
High Level Architecture Diagram

Production Environment – US



Network Diagram – highlight APIs, protocols, integration level

Note: refer to CP diagram



Integration with Celecom – APIs Provides: (WIP)

- CMT – Ringtones
- Top Off (managing payment plans)
- Reporting features?
- Integrate on iOS and Android

Testing Goals: (WIP)

Launch Celecom-Yonder mobile app to customer base

Deliver a great user experience of app

Execute testing process to reduce defects, risk into mobile app for large customer base (1+ million users)

Testing Challenges:

Testing Scope:

Roles:

Responsibilities:

Testing Scope:

Yonder:

- Testing iOS and Android builds, reporting bugs
- Verifying existing and integration of Celecom features
- Working with CP in releasing builds in Staging, Production

Cardinal Peak:

- Performance Testing – scaling customer base up 1K to 100K
- Low-Bandwidth – using perf tool
- API testing?, unit testing
- Testing Reporting Features – from production portal?
- Releasing builds in Staging, Production

iOS Team:

- Provide iOS releases with new functionality
- Release builds in Staging, Production

Celecom:

- Celecom Portal – Manage customer data, reporting?
- User Acceptance Test – handoff to verify business functionality
 - Celecom integrated features
 - New/Existing users on Android, iOS
 - Low-Bandwidth
 - Online/Offline Mode
 - UI/UX; Notifications
 - Staging Environment

Testing Strategy (WIP)

How to show that we met our testing goals?:

1. Weekly Test Summary Reports – show open issues
2. Traceability Matrix – from requirements to test cases to show test coverage
3. Feature freeze, Code freeze -> Integration testing
4. Understand dependencies all layers
5. Release Notes for End user
6. Release Notes internally from Alpha Channel builds

Quality

Instilling Quality on these levels:

Product:

- Executing Smoke Tests, Regression tests

Process:

SDLC – managing defects, reduce risk

- Requirements – review for testability
- Create JIRA dashboards for transparency into issues
- Daily Summary reports to Product Owner, developers
- Need Release notes for builds received

BEST Practices: User Stories Review, Root cause analysis

Test Estimation Effort for User Features:

Precondition: Staging envs are set up

Functional Testing (Android only):

Existing Features – 3 days each for 2 resources

Security testing – 1 day each for 2 resources

Performance Testing:

(Low bandwidth) testing – 2 days for 1 resource

Transition bet. WIFI, cellular, offline – 1 day for 2 resources

Integration Testing (via device):

-API Testing

-Ringtones: 5 days for testing, bug fixes

-Top Off: 3 days for testing, bug fixes

-Reports: 2 days each for testing, bug fixes for 2 resources

System Testing:

End to End – 2 days each for 2 resources

Exploratory Testing:

1 day each for 2 resources

Beta Testing in KL:

4 days for 5 resources (business users)

User Acceptance Test in KL:

.5 day with Celecom business users

TOTAL: 20 days each for 2 resources;

20x8x2 = 320 man hours

Integration Tests

- Testing Telecom APIs
 - Ringtones
 - Top Off
 - Managing user plans (changing, renewing)
- Other APIs
- Reporting
- Testing APIs, via scripts?

System Level Testing

- End to End testing
 - From mobile devices across all systems
 - Admin console for Reporting (Celecom, Yonder portals)
 - Customer Support part
- Types of Testing
 - Functional Testing
 - Exploratory Testing
 - Non-functional Requirements testing

Beta Testing

- Beta testing
 - Test users using app as intended in local environment with business scenarios (day to day use)
- UAT testing
 - Handoff with Celecom business users
 - Traceability with requirements to UAT scenarios
 - Log all issues found

Launch Readiness Checklist:

1. Set up test accounts, test data in Staging Environment
2. Logging for Production events
3. Celecom feature integration
4. Full Regression test of new and existing functionality
 - a) Security testing
 - i. New Users/Existing users in Celecom
 - b) Performance testing
 - i. Low-Bandwidth issues
 - c) Localization – App is in English
 - d) Functional Testing
 - e) Usability
 - i. iOS and Android consistent look and feel
5. Reporting Functionality
 - a) Reporting Portal – Yonder
 - b) Reporting Portal - Celecom
6. User Acceptance Test Signoff from Celecom
 - a) Report any issues found in UAT
7. Beta Testing completed

Deployment Strategy (WIP)

1. External Release Notes
2. Customer Support
3. Releasing Production Builds
4. Telecom Needs