

# Introduction to IBM Worklight

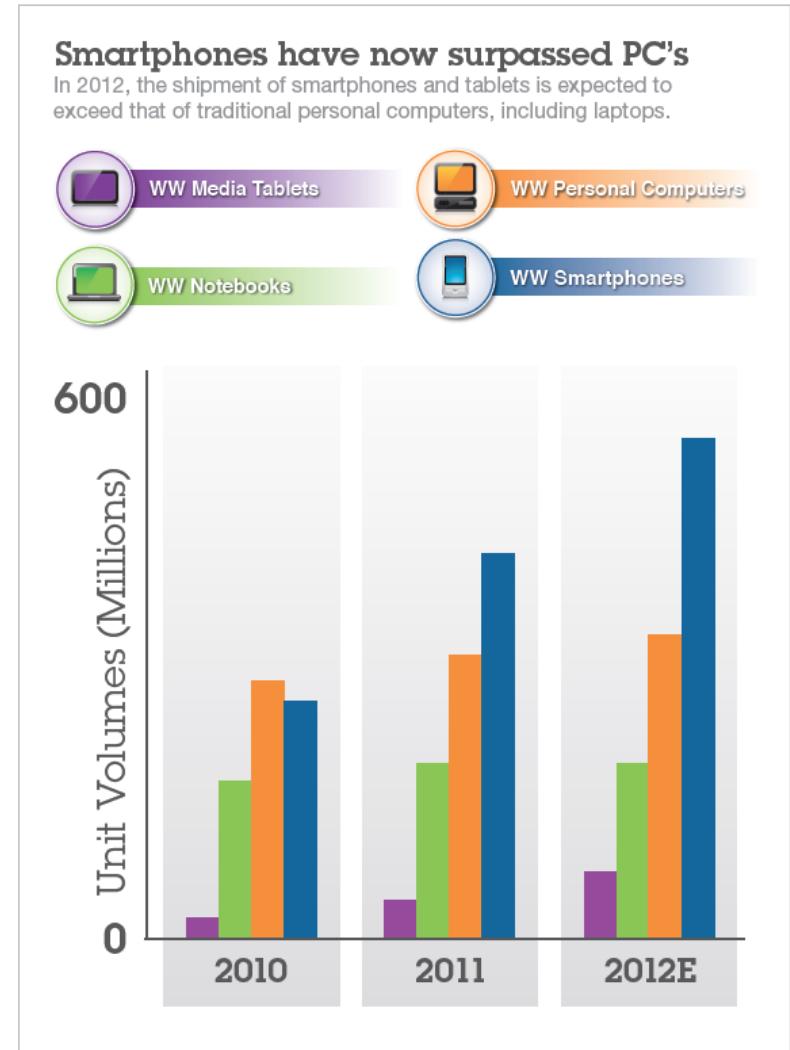
Hrvoje Zivko



# Building and connecting mobile apps has become essential to the mobile enterprise

**3/4** CIO's say mobility solutions are a top priority for **2012**.

**43 billion** mobile applications will be downloaded in 2012.



## Businesses are struggling with the unique mobile challenges

**Fragmentation** of devices and platforms

**Speed** and frequent iteration of the mobile lifecycle and continuous delivery

**Connectivity** to back-end systems and cloud

**Security** to protect corporate data and managing BYOD

**Mobile Context** taking advantage of unique capabilities such as geo-location

**Delivering** high quality apps and rapidly incorporate customer feedback



# A complete mobile apps strategy requires a two-pronged approach

## *Where are you starting today?*

### Multichannel Web Sites

### Mobile Applications

Examples



Why?

Provide a consistent integrated web experience across multiple channels (desktop browser, smartphones, tablets, etc..)

Provide an experience that takes full advantage of the device and its ecosystem

Needed Capabilities

- Aggregate multiple applications
- Content management
- Personalized for roles
- Role based access

- Dedicated, task focussed app
- Integrates with device capabilities (e.g. camera)
- App store presence

# Key capabilities required to address client mobile initiatives

## Application Development



**Build** mobile apps

**Connect &** run mobile systems

- Building & Deploying Apps
- Mobile Lifecycle Management and Testing
- Data Access & Integration

## IT Ops/CISO



**Manage** mobile devices and apps

**Secure** my mobile business

- Device Management
- Network & Data Security and Management
- App Management

## Line of Business



**Extend** capabilities to mobile

**Transform** my business

- Business Applications
- User Engagement
- Mobile Analytics and Insight

# Build, connect, manage and secure your mobile enterprise

*IBM Mobile Foundation*



# IBM Worklight: A mobile enterprise application platform

*Speeding the development, integration and management of mobile applications*

IBM Worklight goes beyond mobile app UI creation to deliver full mobile middleware.



## Client Challenge

Using standards-based technologies and tools and delivering an enterprise-grade services layer that meets the needs of mobile employees and customers

## Key Capabilities

Mobile optimized middleware

- Open approach to 3rd-party integration
- Mix native and HTML
- Strong authentication framework
- Encrypted offline availability
- Enterprise back-end connectivity
- Unified push notifications
- Data collection for analytics
- Direct updates and remote disablement
- Packaged runtime skins

# Open, cost-effective, cross-platform app development

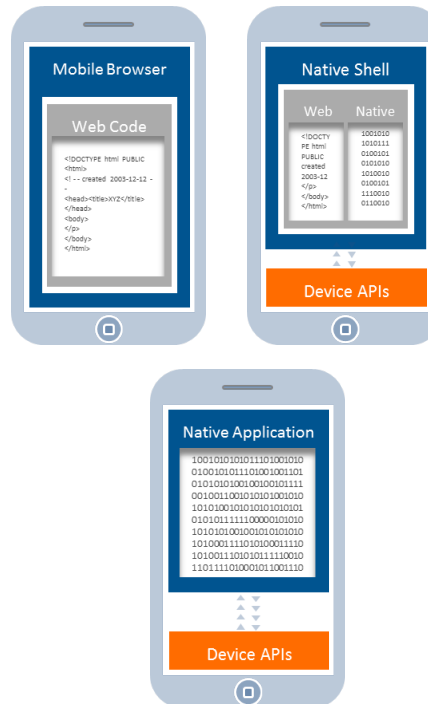
App development using native and/or familiar web technologies:

- HTML5
- CSS3
- JavaScript
- Java ME

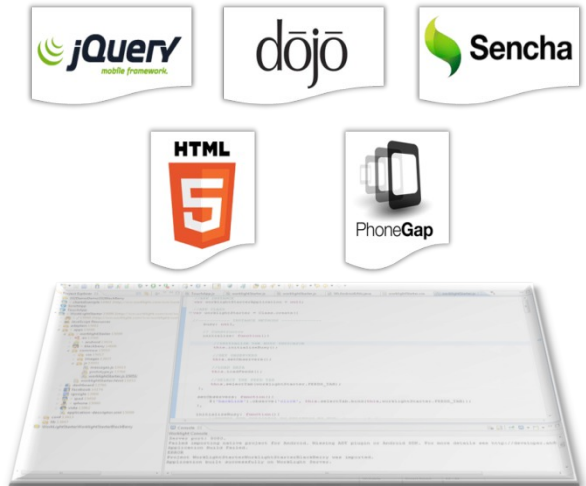


App delivery in variety of forms:

- Mobile Web app
- Hybrid app
- Native



Compatible with prominent HTML5 libraries and tools:





# Supporting multiple mobile application development models



# Addressing numerous enterprise mobile pain points

## Need to support multiple devices and fragmented operating environments

- Build once. Run anywhere using HTML5/JS/CSS and Cordova
- Android, iOS, Blackberry, Microsoft, iGoogle, Facebook app, Adobe AIR
- Runtime Skins for different resolutions
- Application Lifecycle Management
- Centralized Build Process

## Inherent security risks of the mobile enterprise

- Secured offline access
- On device encryption of user data
- Single sign-on mechanism
- SSL encryption
- Protection against reverse engineering vulnerabilities
- Multi-factor authentication

## Difficulty connecting to corporate data

- Direct access to back-end systems
- Leverage existing SOA services
- Server-side caching

## Challenge of app governance and delivery

- App distribution
- App Version management
- Remote disabling apps
- Direct Update
- Push Notification service management
- Analytics and Usage report

## 24 x 7, enterprise-level availability

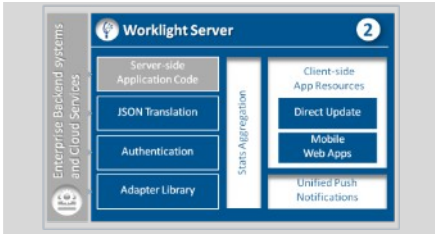
- WebSphere Application Server ND
- Reliable, Highly Available and Scalable



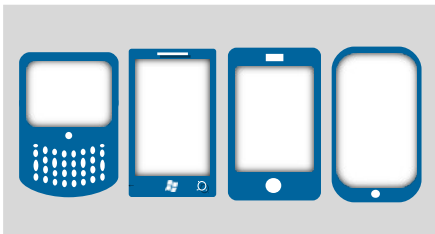
# Worklight overview



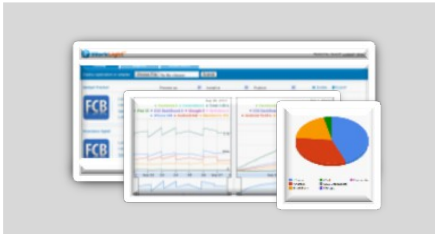
**Worklight Studio**  
 The most complete, extensible environment with maximum code reuse and per-device optimization



**Worklight Server**  
 Unified notifications, runtime skins, version management, security, integration and delivery



**Worklight Runtime Components**  
 Extensive libraries and client APIs that expose and interface with native device functionality



**Worklight Console**  
 A web-based console for real-time analytics and control of your mobile apps and infrastructure

# Worklight Studio

## Eclipse Based IDE



- Native, hybrid and standard web development

## Environment-specific optimization

- Common code with overrides/extensions
- Native development options
- Runtime skins

## 3rd-party library integration

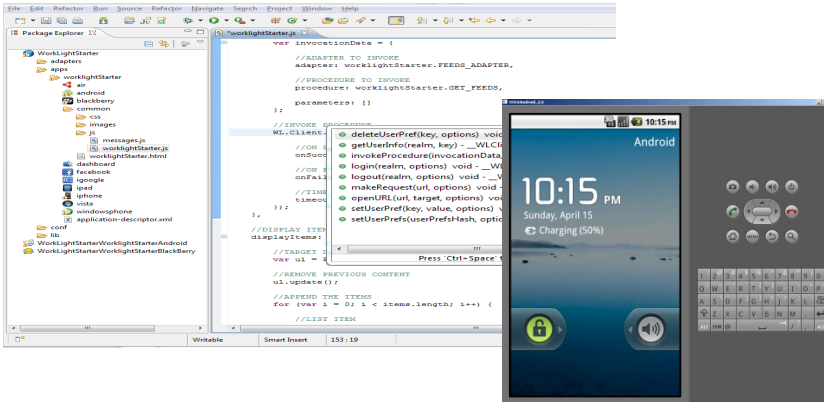


## Device SDK integration

- Access to emulators and debugging tools

## Supports auto-complete and validation

- The IDE includes the Tools, Worklight Server and database (No separate installs required anymore)



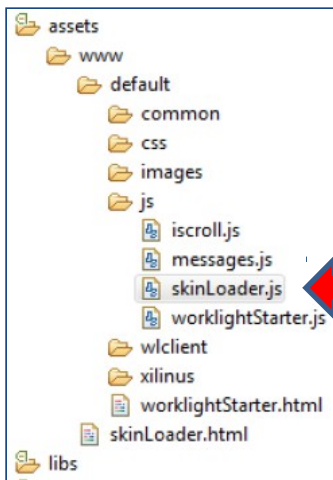
# Worklight Server: Write once, run anywhere with runtime skins



Skins provide support for multiple form factors in a single executable file for devices of the same OS family.

- Different screen sizes
- Different screen densities
- Different input methods

Decision on which skin to use is done automatically at runtime



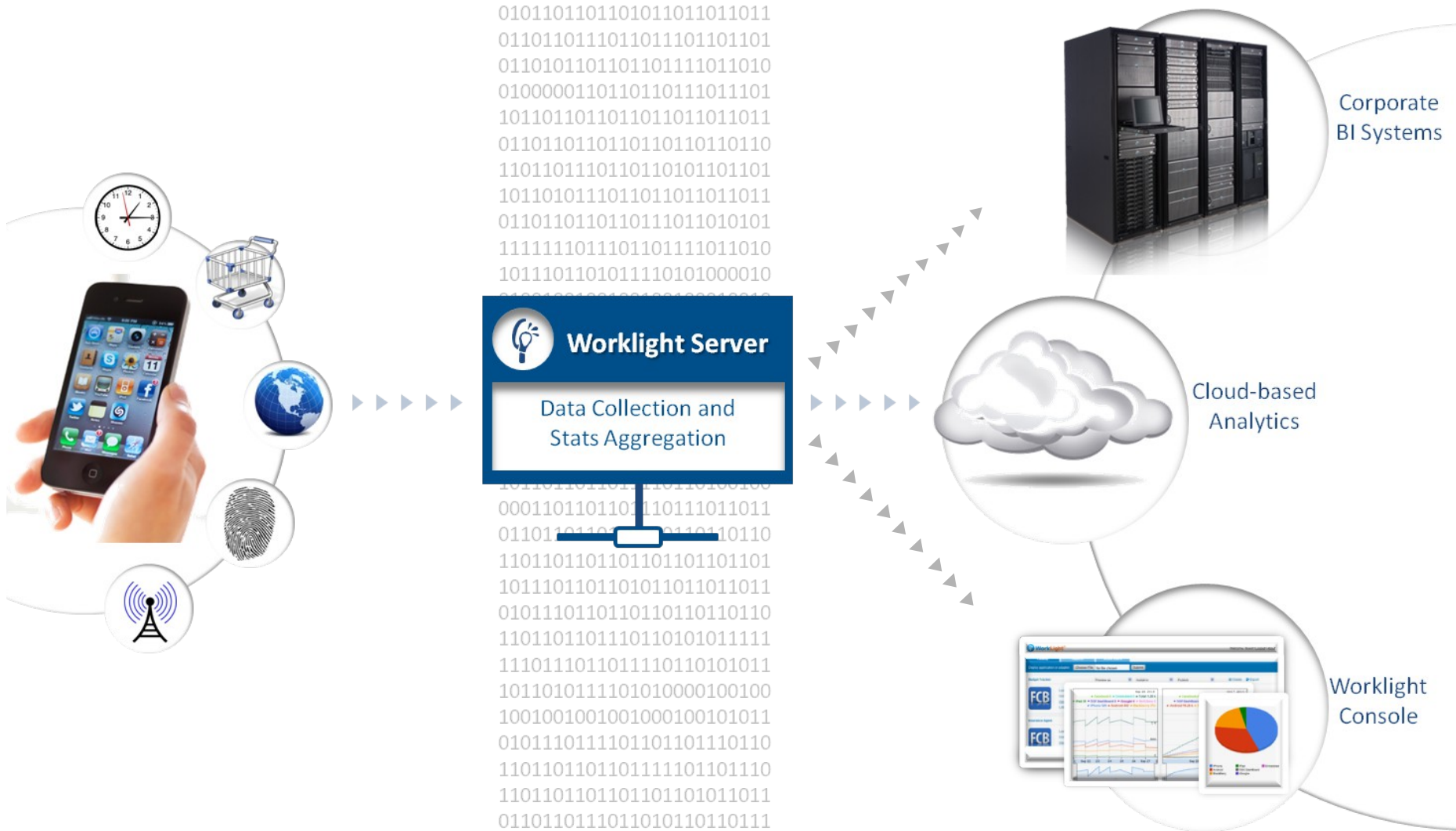
Developer-controlled JavaScript file run at app startup determines which skin to load

```
function getSkinName() {
    var skinName = "default";
    if (getVersion () == "2.2" ||
        getVersion () == "2.1") {
        skinName = "android.HTML5";
    }
    return skinName;
}
```

```
<android>
  <skins>
    <skin name="default">
      <folder name="common"/>
      <folder name="android"/>
    </skin>
    <skin name="android.phone">
      <folder name="common"/>
      <folder name="android"/>
      <folder name="android.phone"/>
    </skin>
    <skin name="android.tablet">
      <folder name="common"/>
      <folder name="android"/>
      <folder name="android.tablet"/>
    </skin>
  </skins>
</android>
```



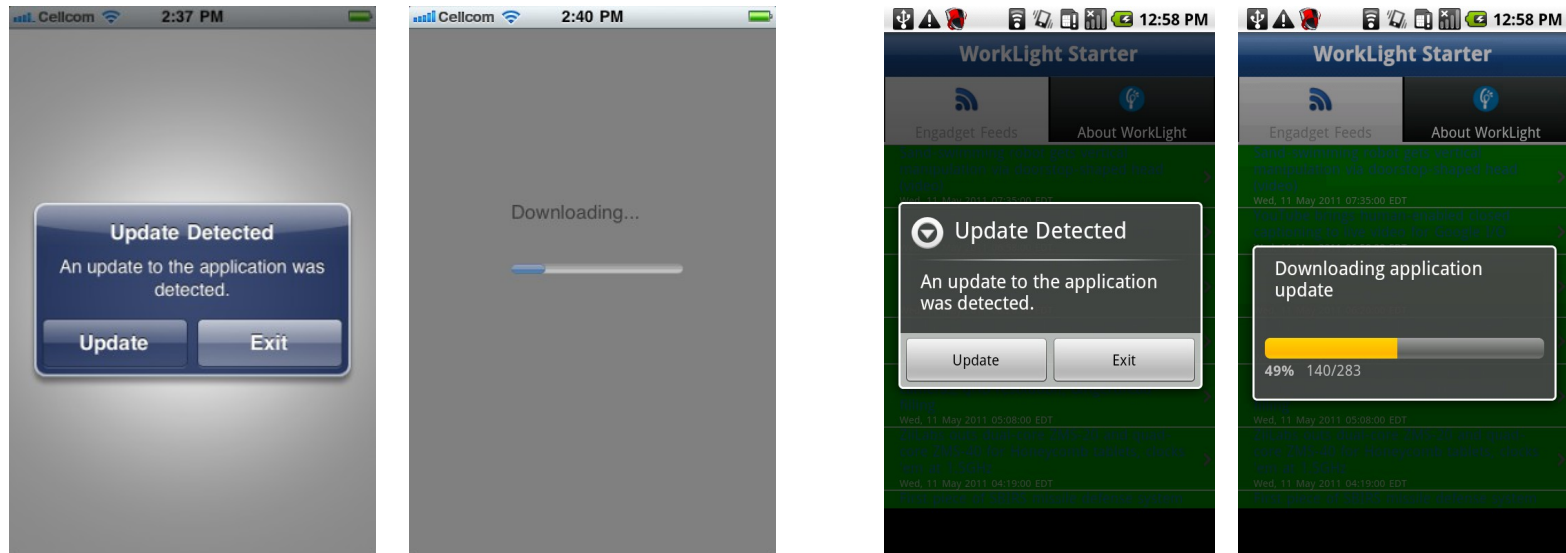
# Worklight Server– Enabling data collection and analytics



# Worklight Server: Enabling Direct Update of mobile apps

## *Manage and enforce mobile app version control across your enterprise*

- Update detection upon application launch
- Dialog box for easy user selection
- Download progress bar for status tracking
- Automatic application restart upon completion



# Worklight Application Center

*Securely govern, manage and distribute mobile apps across your enterprise*

## Your private app store provides:

- **Administrators** with fine-grained control over app distribution across the enterprise, with ACL and LDAP support.
- **Employees** with one-stop shopping for the latest apps needed by their department and optimized for their device;
- **Developers** with an easy way to distribute mobile builds to development and test teams;
- **Your entire organization** with a system for eliciting and managing user feedback, to improve and transform your business.

The screenshot displays the IBM Worklight Application Center interface. The top navigation bar includes 'IBM Worklight Application Center', 'Applications' (selected), and 'Devices'. A search bar is present on the right. The main content area is titled 'Application Management' and shows a list of 'Available Applications'. The list includes:

- App Center Installer** (iOS): Installation: unrestricted | Administration: restricted | version 1 | 4/25/12 11:44 AM | (1)
- Dojo Showcase** (iOS): Installation: unrestricted | Administration: restricted | version 20120404 | 4/25/12 7:29 PM | (0)
- Dojo Showcase** (Android): Installation: unrestricted | Administration: restricted | version 20120404 | 4/26/12 1:11 PM | (0)
- PhoneGap Showcase** (iOS): Installation: unrestricted | Administration: restricted | version 20120404 | 4/25/12 7:29 PM | (1)
- TestApp** (Android): Installation: unrestricted | Administration: restricted

On the right side, there is a detailed view for 'Add an application'. The 'Application Details' section includes fields for:

- Package:** com.ibm.int.sample.MobileClinic
- Internal Version:** 1.0
- Commercial Version:** 1.0
- Label:** Mobile Clinic
- Author:** demo
- Description:** (2048 characters maximum)
- Recommended:** (checkbox)



# Three Ways to Get Started with IBM

1

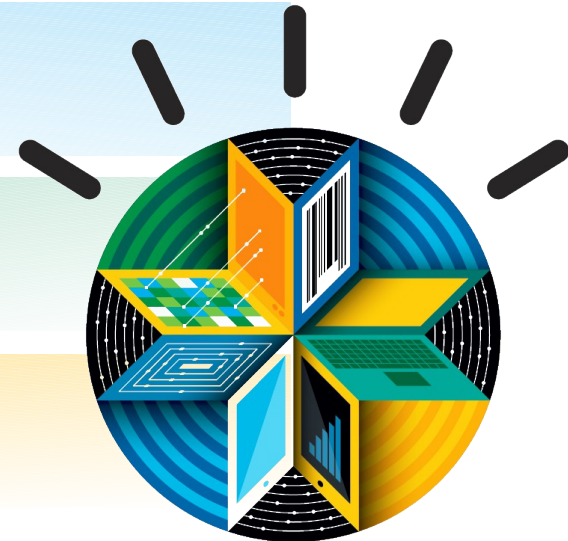
Download the free IBM Worklight Developer Edition: [ibm.co/worklightde](http://ibm.co/worklightde)

2

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3

Talk with your IBM representative or Business Partner to find the right next step for you



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