

IBM Commerce

**Mobile Application
Content Manager:**
Content in the cloud

Dr. Dieter Buehler

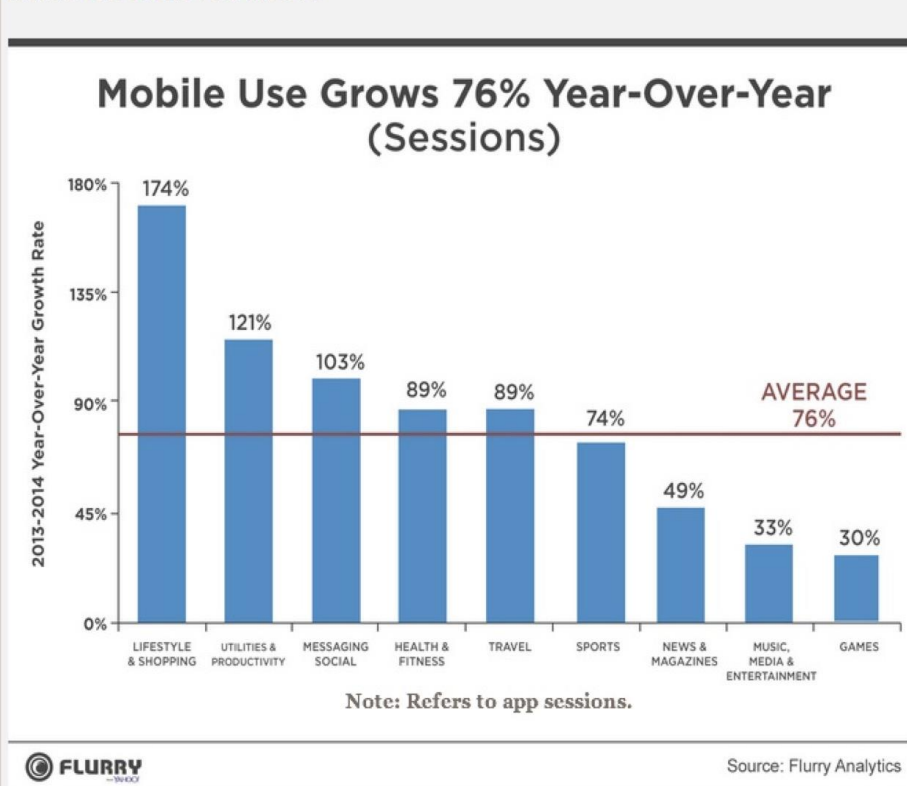
Software Architect

IBM Digital Experience Software



There is stunning growth of mobile app usage

Mobile Use Grows 76% in 2014



Mobile app usage grew a stunning 76% in 2014.

In 2014 apps (47%) beat PC (46%) for internet traffic

The biggest mobile app use growth was in the categories of

Lifestyle/Shopping (174%)

Utilities/Productivity (121%)

Messaging/Social Media (103%)

Mobile Content Marketing is overlooked

30% of budget spent on content marketing, 59% plan increase

Only 30% of B2B marketers say their organizations are effective at content marketing

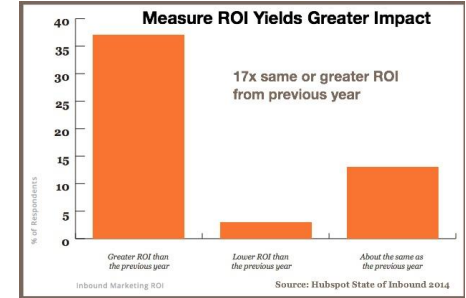
80% have no Mobile Content Marketing Strategy

Studies show that content strategy can significantly increase ROI (17X – 100X)

70% of mobile searches lead to action in < 1day

93% using mobile to research do purchase

The biggest challenges are automation, organization and strategy.



"By 2017, 15% of consumers will respond to context-aware offers based on their individual demographics and shopper profiles." *Gartner*

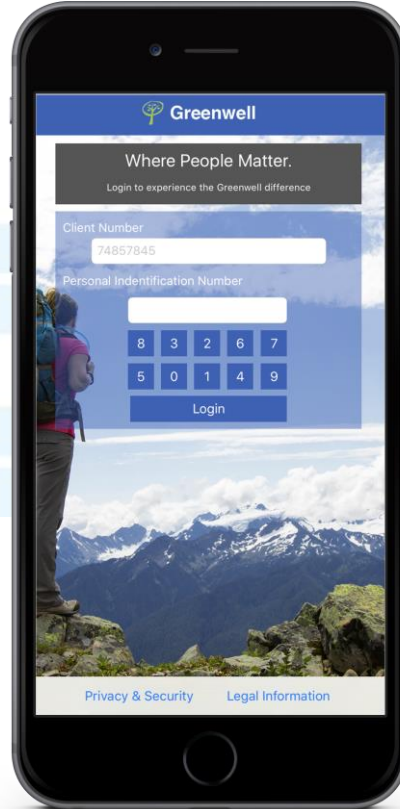


PERSONAL. ADAPTIVE. RELEVANT.



Jane

line of business



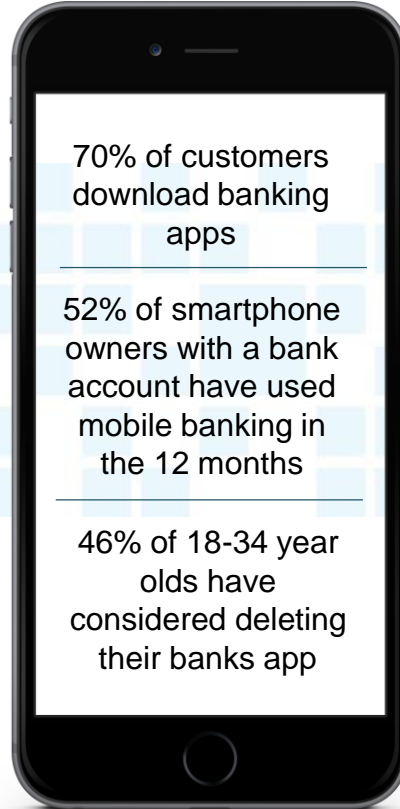
John

mobile app developer



Jane

line of business



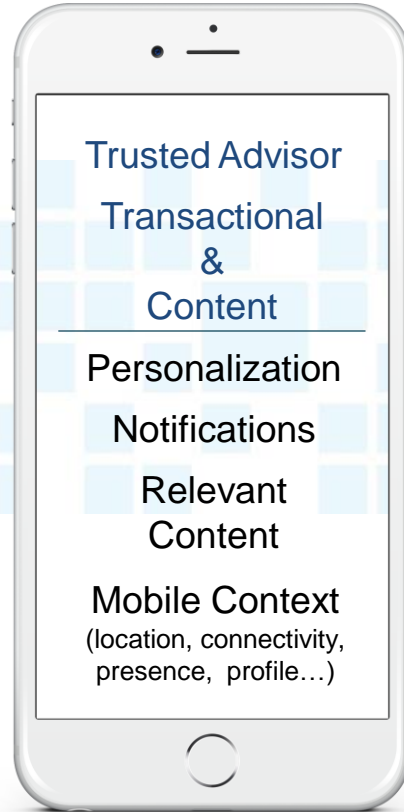
John

mobile app developer



Jane

line of business



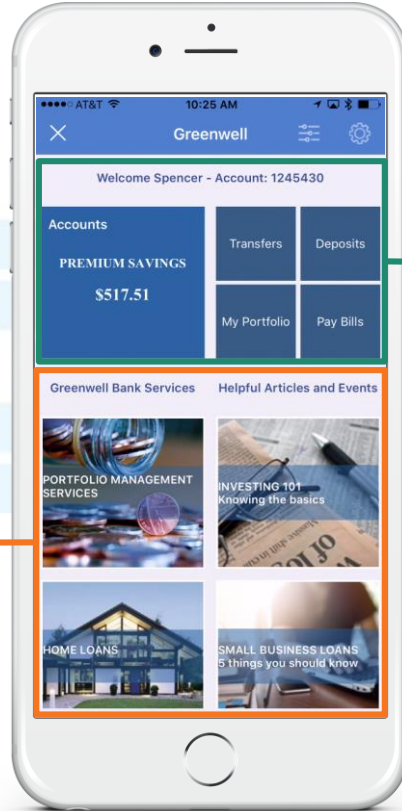
John

mobile app developer



Jane

line of business



John

mobile app developer

Mobile App Content Management

Challenges in providing personal, relevant and adaptive content to native mobile applications

1



line of business



mobile app developer

3



Customer

Business needs drive content updates to app

Example: new offer, updated policy, article,...

App Developer updates app with new content and compiles a new version

User is alerted of a new version of app is available via app store

User prompted to download a resource bundle to the app

 Jane – Content Guru 15m

Our content update cycle is to long, missing market opportunity

#byebyeopportunity


  ...

 Jane – Content Guru 20m

I need to get the most relevant content to my mobile app customers much **FASTER!**



#need4speed


  ...

 Jane - Content Guru 1hr

No easy way to personalize content within my app



#needsomepzn


  ...

 Jane – Content Guru 2hr

No consistent content authoring experience



#allovertheplace


  ...

 John - Mobile App Developer 15m



All content changes require IT involvement


#notscalable

  ...



 John - Mobile App Developer 1m

We need a standard programmatic way to get approved content into our mobile app

  ...

 John - Mobile App Developer 3hr

Testing and versioning all of these content changes is a huge effort

  ...

 John - Mobile App Developer 20m

My team needs to spend time real app development, not small content changes

  ...

Mobile Application Content Manager For Bluemix

Enabling mobile project teams to engage mobile app users with personal and contextual content in the mobile moment

- Cloud based content management with ease of use
- Deliver persuasive, targeted and contextual content to your mobile apps
- Easy to work with both existing and new mobile apps

IBM Bluemix

DASHBOARD SOLUTIONS CATALOG PRICING DOCS COMMUNITY

Back to All Categories

Mobile Application Content Manager
IBM

PUBLISH DATE
10/01/2015

AUTHOR
IBM

TYPE
Service

VIEW DOCS

IBM Mobile Application Content Manager enables a mobile project team to engage app users with personal and contextual content in the mobile moment.

- **Easy to work with both existing and new apps**
Developers can leverage an extensible set of content management APIs and light-weight native SDKs to programmatically set conditions for adaptive content within a new or existing mobile app.
- **Deliver persuasive, targeted and contextual content without IT**
Business users can respond to market needs quickly to engage their users with personalized and relevant mobile content without involving IT.
- **Effective customer engagement with mobile context**
Context matters! Leverage mobile context to decide when content is delivered and how to display it.
- **Comprehensive content management with ease of use**
Business users author, manage, and publish content through an intuitive interface with workflow support for review, approval and auditability of content changes.

Pick a plan Monthly prices shown are for

Plan	Features
Free	Allows up to 100,000 API requests per month Allows up to 50 content items per month 1 content author per month

This plan allows for up to 100,000 API requests, 50 content items and one content author

Add Service

Space: adaptivecontent

App: Leave unbound

Service name: Greewell Banking

Selected Plan: Free

CREATE

Published Content

Health Savings Accounts

Hybrid Management Services

Investing 101

Small Business Loans

How to compare auto insurance

Tips for saving money

Estate Planning Seminar

Investment Seminar

Greewell

Welcome to Greewell Bank

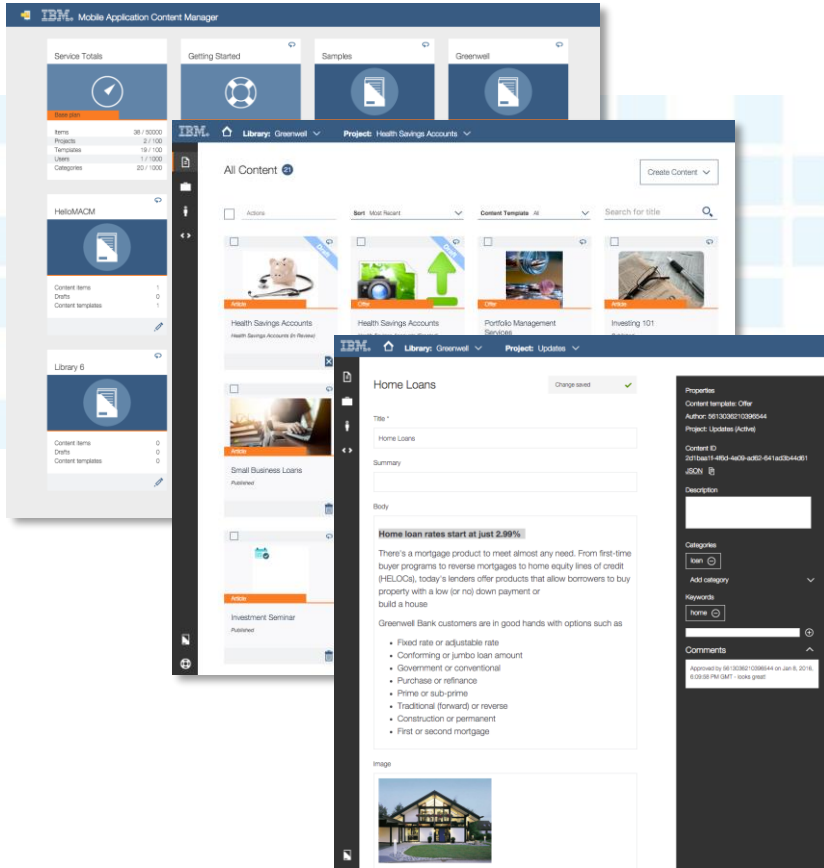
Green Focals

Home Loans

Small Business Loans

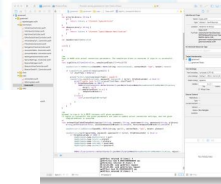
MACM Components

Content Management UIs



RESTfull Services, SDKs, Adaptors

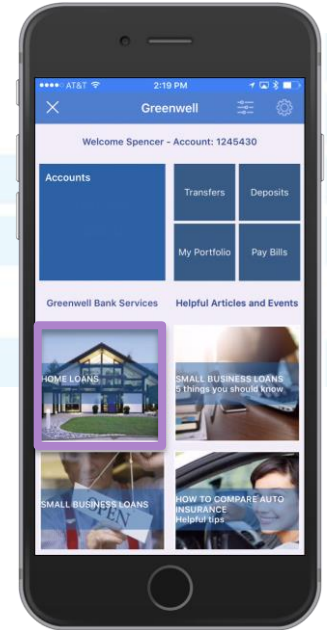
{JSON}



IBM MobileFirst



Client Rendering



MACM Content Management UIs

- Simple role-based user interface for
 - Authors
 - Reviewers
 - Managers
- Built in approval workflow
- Projects, drafts, preview
- Custom content types
- Keywords and Categories
- Support for mobile push notifications

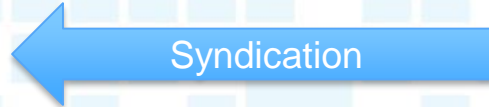
The image displays three overlapping screenshots of the IBM Mobile Application Content Manager (MACM) user interface. The top screenshot shows the 'Service Totals' dashboard with a table of metrics: Items (28 / 15000), Projects (2 / 100), Templates (9 / 100), Users (7 / 1500), and Categories (20 / 1000). The middle screenshot shows the 'All Content' view with a grid of content items like 'Health Savings Accounts' and 'Small Business Loans'. The bottom screenshot shows the 'Home Loans' content editor with fields for Title, Summary, Body, and Categories, along with a list of keywords and a comments section.

MACM Data Delivery

Delivery Cluster



Authoring Cluster



- High Performance Delivery
- Published Content Only
- Data access via APIs / App ID

- Browser based concurrent authoring
- Drafts and published Content
- User management

Mobile Application Content Manager

Streamlining process for better business outcomes



mobile app developer

Use content management APIs and SDKs to programmatically set conditions for adaptive content within the mobile app



line of business

Author content using easy to use UI with templates to provide consistency

Apply segmentation to content to provide personalization

Assign workflow and get approvals from stakeholders

Publish content without involving IT or re-deployment



Customer

Personalized, adaptive, and relevant app experience

Mobile context

 Jane – Content Guru 15m


My team owns and controls content and messaging and when it get updated!

  ...



 Jane – Content Guru 20m


My team can be flexible in responding to market and business needs without updating code

  ...



 Jane - Content Guru 1hr

Customer's love the personalized mobile app experience

  ...

 Jane – Content Guru 2hr


Our app's content always current and relevant!

  ...



 John - Mobile App Developer 15m


This is way more efficient!

  ...



 John - Mobile App Developer 1m


We love the extensible set of APIs

  ...



 John - Mobile App Developer 3hr

This has really minimized our code changes, versions and testing of the app!

  ...

 John - Mobile App Developer 20m

We can now code core app updates like integration and not small content changes

  ...

Can Content Management Change your Mobile Business?

Mobile Application Content Manager



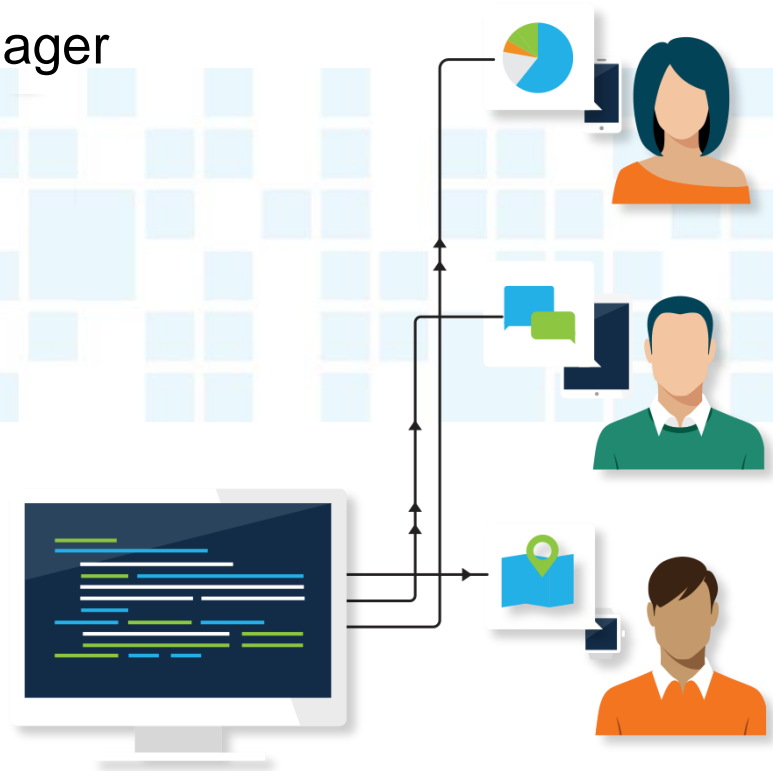
Write, manage and publish content to your app—without relying on I.T.



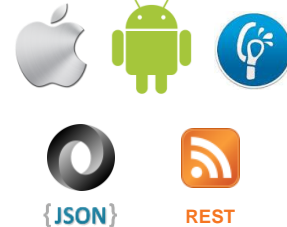
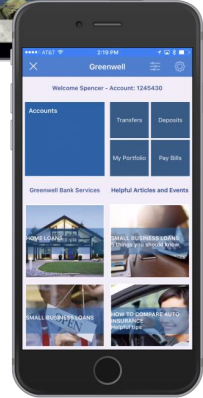
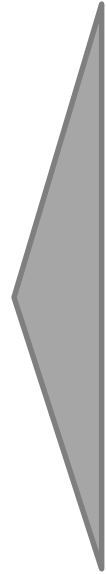
Mobile context lets you decide when, where and how to deliver content.



Targeted content responds efficiently, and sends personalized content.



Technical Background



- Provisioning
- Billing
- Integration
- Support

- REST APIs
- JSON
- Adapters/SDKs
- Samples/Tutorials

MACM Service Provisioning via Bluemix

The screenshot displays the IBM Bluemix console interface. At the top, the browser address bar shows the URL <https://console.ng.bluemix.net/catalog/?search=content>. The navigation bar includes links for DASHBOARD, SOLUTIONS, CATALOG, PRICING, DOCS, and COMMUNITY. A search bar in the top left contains the text "content" and is highlighted with a red box. On the left sidebar, a navigation menu lists categories: Starters, Compute, Services, and Provider. The main content area is titled "Services // The building blocks of any great app" and features several service cards. The "Mobile" section is highlighted with a red box, and a blue arrow points to the "Mobile Application Content Manager" service card, which is also highlighted with a red box. Other visible services include Watson (AlchemyAPI, Language Translation, Visual Recognition), IBM Push Notifications, and Web and Application (box).

- Starters**
 - Bollerplates
- Compute**
 - Runtimes
 - Containers
- Services**
 - Watson
 - AlchemyAPI
 - Language Translation
 - Visual Recognition (IBM BETA)
 - Mobile
 - IBM Push Notifications
 - Mobile Application Content Manager (IBM)**
 - Web and Application
 - box (Third Party)
- Provider**
 - IBM
 - Third Party
 - Community
 - Beta

MACM Service Provisioning via Bluemix

IBM Bluemix Ready? Try the new Bluemix | New! Try OpenWhisk 40

← Back to All Categories DASHBOARD SOLUTIONS CATALOG PRICING DOCS COMMUNITY

Mobile Application Content Manager

IBM

PUBLISH DATE
03/23/2016

AUTHOR
IBM

TYPE
Service

[VIEW DOCS](#)

IBM Mobile Application Content Manager enables a mobile project team to engage app users with personal and contextual content in the mobile moment.

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Context matters! Leverage mobile context to decide when content is delivered and how to display it.
- Comprehensive content management with ease of use**
Business users author, manage, and publish content through an intuitive interface with workflow support for review, approval and audibility of content changes.

Add Service

Space:
dev

App:
Leave unbound

Service name:
Dieters MACM

Selected Plan:
Basic

[CREATE](#)

MACM Service Provisioning via Bluemix

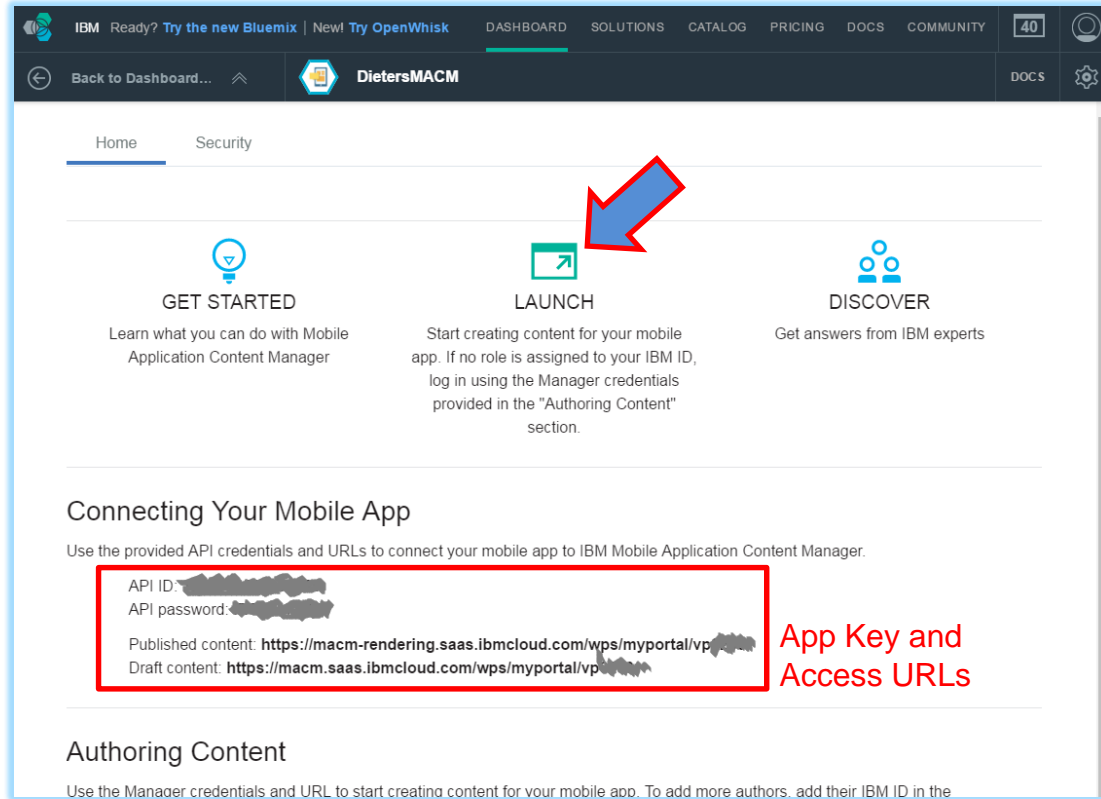
The screenshot displays the IBM Bluemix console interface. At the top, the navigation bar includes the IBM logo, the text "Ready? Try the new Bluemix | New! Try OpenWhisk", and menu items for "DASHBOARD", "SOLUTIONS", "CATALOG", "PRICING", "DOCS", and "COMMUNITY". The user's organization is identified as "ORG: buehler@de.ibm.com".

The main content area is divided into two sections. The upper section features a card for a "MACM-API" application, which is a Java-based application (indicated by the Java logo) and is currently in a "Running" state. The lower section, titled "Services", contains three service cards:

- DietersMACM**: Mobile Application Content Manager, Unbound Service, Plan: Basic. A red arrow points to this card.
- Dieters Business Rules**: Business Rules, Unbound Service, Plan: standard.
- Dieters DCS**: Document Conversion, Unbound Service, Plan: standard.

Each service card includes a gear icon for configuration and a star icon for favorites.

MACM Service Provisioning via Bluemix



The screenshot shows the IBM Bluemix DietersMACM dashboard. The top navigation bar includes links for IBM, OpenWhisk, and various service categories. The main content area features three primary actions: GET STARTED, LAUNCH, and DISCOVER. A red arrow points to the LAUNCH button, which is highlighted with a green border. Below these actions, a section titled "Connecting Your Mobile App" provides instructions and a table of API credentials. A red box highlights the API ID and password fields, with a red arrow pointing to the text "App Key and Access URLs" next to the table. The "Authoring Content" section is partially visible at the bottom.

IBM Ready? Try the new Bluemix | New! Try OpenWhisk | DASHBOARD SOLUTIONS CATALOG PRICING DOCS COMMUNITY 40

Back to Dashboard... DietersMACM DOCS

Home Security

GET STARTED
Learn what you can do with Mobile Application Content Manager

LAUNCH
Start creating content for your mobile app. If no role is assigned to your IBM ID, log in using the Manager credentials provided in the "Authoring Content" section.

DISCOVER
Get answers from IBM experts

Connecting Your Mobile App

Use the provided API credentials and URLs to connect your mobile app to IBM Mobile Application Content Manager.

API ID:	[REDACTED]
API password:	[REDACTED]
Published content:	https://macm-rendering.saas.ibmcloud.com/wps/myportal/vp/[REDACTED]
Draft content:	https://macm.saas.ibmcloud.com/wps/myportal/vp/[REDACTED]

App Key and Access URLs

Authoring Content

Use the Manager credentials and URL to start creating content for your mobile app. To add more authors, add their IBM ID in the

MACM JSON Data Access

IBM Mobile Application Content Manager

Service Totals	Book App	QuizFlow	Getting Started
Items 466 / 50000	Content items 6	Content items 400	Content items 0
Projects 4 / 100	Drafts 0	Drafts 3	Drafts 0
Templates 13 / 100	Content templates 10	Content templates 3	Content templates 0
Users - / 5			

Published Content

Actions: Sort: Most Recent Content Template: All Search for content

Thumbnail	Title	Tags
	Parallel Lives	book_campaign_2015
	The Awakening	bestseller
	Les Miserables	special_offer, book_campaign_2015
	Twenty Thousand Leagues Under the Sea	bestseller, book_campaign_2015
	Adventures of Huckleberry Finn	bestseller
	Treasure Island	bestseller, special_offer

Treasure Island

Title *
Treasure Island

COVER

price
13.0

isbn
978-2081241947

publish_date
Nov 13, 1883, 11:05:26 PM GMT-05:50:36

title
Treasure Island

Properties

Content template: Book
Published Jul 3, 2015, 9:04:31 AM CDT
Author:

Content ID
df822bca-025d-4657-a591-5f4c178dc295

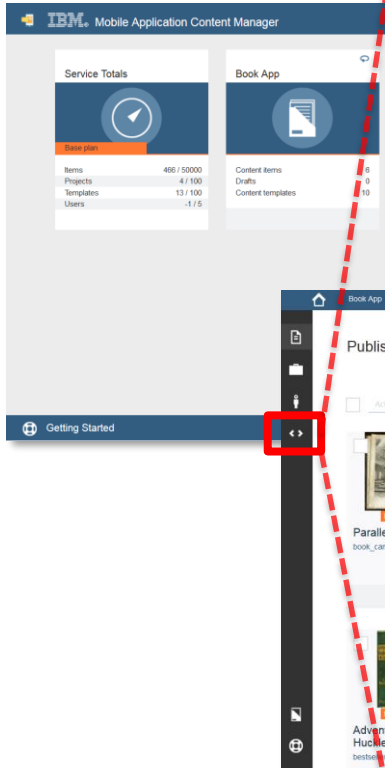
JSON

Description:
None provided

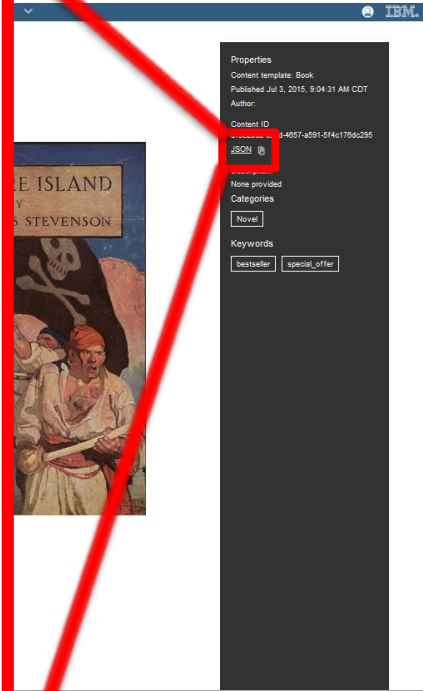
Categories

Keywords

MACM JSON Data Access



```
{
  "header":
  {
    "propertyIndex":
    {
      "id":0,
      "title":1,
      "keywords":4,
      "categories":5,
      "projectname":3,
      "lastmodifieddate":2
    },
    "elementIndex":
    {
      "author":6,
      "title":11,
      "cover":7,
      "price":9,
      "publish_date":10,
      "isbn":8
    }
  },
  "values":
  [
    [
      "df862bca-025d-4657-a591-5f4c176dc295",
      "Treasure Island",
      "2015-07-09T11:33:37.266Z",null,
      "bestseller, special_offer",
      "book app\\macm\\books\\novel",
      "Robert Louis Stevenson",
      "\\wps\\wcm\\myconnect\\demo\\c27s-1911.jpg?MOD=AJPERES",
      "978-2081241947",13.0,
      "1883-11-14T04:56:02.000Z",
      "Treasure Island"
    ]
  ]
}
```



MACM Getting Started

MFP Hybrid Adapter

Android SDK

iOS SDK

Sample App

Tutorial

The image displays a collage of overlapping browser windows. The top-most window shows the GitHub repository for 'digexp / MACM-SDK-iOS'. Below it, another window shows the 'Requirements' section of the same repository, listing 'iOS 8.0+' and 'XCode 7.x'. To the right, a window shows the 'Getting Started with IBM Mobile Application Content Manager for iOS Developers' tutorial article on the IBM Bluemix developer website. The article includes a 'Click to start' button and a quote: 'Build cognitive apps that enhance, scale and accelerate human expertise.' The bottom-most window shows the URL: <https://developer.ibm.com/bluemix/2015/11/27/getting-started-mobile-application-content-manager-ios/>

<https://developer.ibm.com/bluemix/2015/11/27/getting-started-mobile-application-content-manager-ios/>

Data access using the Android SDK

Retrieving content

Querying a list of content items by path

```
// create the service that connects to the MACM instance
CAASService service = new CAASService("https://macm-rendering.saas.ibmcloud.com", "wps", "vp1234", "username", "pass")
// handle the request result asynchronously
CAASDataCallback<CAASContentItemsList> callback = new CAASDataCallback<CAASContentItemsList>() {
    @Override
    public void onSuccess(CAASRequestResult<CAASContentItemsList> requestResult) {
        CAASContentItemsList itemsList = requestResult.getResult();
        List<CAASContentItem> items = itemsList.getContentItems();
        // do something with the list of items
    }

    @Override
    public void onError(CAASErrorResult error) {
        // handle the error
    }
};
// create the request
CAASContentItemsRequest request = new CAASContentItemsRequest(callback);
request.setPath("Samples/Content Types/Book"); // path to "Book" content items
// include the specified properties in the response
request.addProperties(CAASProperties.OIS, CAASProperties.CONTENT_TYPE, CAASProperties.TITLE,
    CAASProperties.LAST_MODIFIED_DATE, CAASProperties.CATEGORIES, CAASProperties.KEYWORDS);
// request the url to the cover image
request.addElements("cover");
// request the first 10 items
request.setPageSize(10);
request.setPageNumber(1);
// execute the request
service.executeRequest(request);
```

<https://github.com/digexp/MACM-SDK-android/>

Data access using the iOS SDK

Querying a list of content items by path

```
CAASContentItemsRequest *request = [[CAASContentItemsRequest alloc] initWithContentPath:@"Samples/Content Types/Book"  
  
    if (requestResult.httpStatusCode == 200) {  
    }  
  
    }];  
  
request.properties = @[CAASProperty.OID, CAASProperty.TITLE, CAASProperty.KEYWORDS];  
request.elements = @[@"author", @"cover", @"isbn", @"price", @"publish_date"];  
[self.caasService executeRequest:request];
```

<https://github.com/digexp/MACM-SDK-iOS>

Sample Code for the Bluemix Quiz App (Node.js)

```
//npm install -S request
var request = require('request')
var username = 'XXXXXXXXXXXXXXXXXXXXX'
var password = 'XXXXXXXXXXXXXXXXXXXXX'
var options = {
  url: 'https://macm.saas.ibmcloud.com/wps/myportal/vpXXXX/caas?urile=wcm%3Apath%3Aquestions/views/all&current=true&mime-type=application/json',
  auth: {
    user: username,
    password: password
  },
  headers: {
    'Cookie': 'ibm.login.type=basicauth'
  },
  jar: 'true'
}

request(options, function (err, res, body) {
  if (err) {
    console.dir(err)
    return
  }
  console.log('headers', res.headers)
  console.log('status code', res.statusCode)
  console.log(body)
})
```

Sample Code for the Bluemix Quiz App (Node.js)

```
//npm install -S request
var request = require('request')
var username = 'XXXXXXXXXXXXXXXXXXXXXXXXX'
var password = 'XXXXXXXXXXXXXXXXXXXXXXXXX'
var options = {
  url: 'https://macm.saas.ibmcloud.com/wps/myportal/vpXXXX/:saas?urile=wcm%3Apat%3AQuestions/views/all&current=true&mime-type=application/json',
  auth: {
    user: username,
    password: password
  },
  headers: {
    'Cookie': 'ibm.login.type=basica
  },
  jar: 'true'
}

request(options, function (err, res, body) {
  if (err) {
    console.dir(err)
    return
  }
  console.log('headers', res.headers)
  console.log('status code', res.statusCode)
  console.log(body)
})
```

Tenant ID

Library Name

Predefine d Queries

Mime type

Adressing an individual content item:

```
e=wcm:oid:' + contentId + '&page=ibm.portal.caas.page&mime-type=application/json',
```

JSON list result (delivered from MACM to the Bluemix App)

```
{
  "listProperties":
    {
      "id":"5e36419b-130d-432c-bd2a-7882dd7ce5a8", "lastmodifieddate":"2015-08-21T12:24:34.455Z",
      "pageSize":50, "pageNumber":1, "hasNext":true
    },
  "header":
    {
      "propertyIndex":{"id":0,"title":1,"contenttype":3,"lastmodifieddate":2}
    },
  "values":
    [
      ["5ee42b81-2534-42b8-8265-8681d416ee93","Robert Downey Jr.,"2015-09-29T10:02:31.932Z","One Image Question"],
      ["0dfcc1a0-a552-477e-8fbe-dc1568929db4","Tommy Lee Jones","2015-09-28T14:24:46.077Z","One Image Question"],
      ["17ee9f97-e83c-4da1-874c-7af905015254","Udo Schoene","2015-09-28T08:50:32.418Z","User"],
      ["ee7abac5-44e7-4de9-bdb3-fea1af5ef5c3","William Holden","2015-09-27T18:27:14.903Z","One Image Question"],
      ["6c42c726-ce58-42c9-8cce-f52c8e272480","Will Smith","2015-09-27T18:27:14.752Z","One Image Question"],
      ["3e087f9e-8f11-455e-adc8-98d1eb8057e2","Tom Hanks","2015-09-27T18:27:14.405Z","One Image Question"],
      .....
    ]
}
```

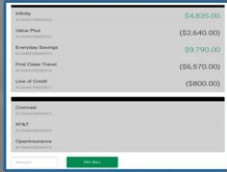
JSON list result (delivered from MACM to the Bluemix App)

```
{
  "header":
    {
      "propertyIndex":
        {
          "id":0,"title":1,"keywords":4,"categories":5,"projectname":3,"lastmodifieddate":2
        },
      "elementIndex":
        {
          "Answer 2":7,"Question":11,"Image":10,"Answer 3":8,"Correct Answer":9,"Answer 1":6
        }
    },
  "values":
    [
      [
        "f83cc5c0-fa5f-44f1-bb7c-30403723d8b5",
        "Which World Heritage Site is this?",
        "2015-09-24T13:59:08.442Z",null,"",
        "quizflow\macm\topic\nature",
        "Victoria Falls",
        "Kembe Falls",
        "Xiguazu Falls",
        "Xiguazu Falls",
        "\wps\wcm\myconnect\demo\21de6078-8af7-4372-9921-40cf4466311c\Attraction_008.jpg?MOD=AJPERES",
        "Which World Heritage Site is this?"
      ]
    ]
}
```

Demo - Greenwell Bank

Mobile Engagement with IBM Bluemix Services

Transactional



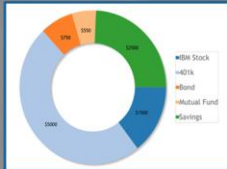
Offers



Investment



Market Info



Greenwell Banking Mobile App

Personal. Adaptive. Relevant.

First point of interaction with customers

- Mobile application

Key banking capabilities

- Transfers, bill pay, account balance, deposits...

Communication channel

- Drive new services and products by providing personalized content
- Persuasive content
- Trusted advisor strategy
- Drive customer loyalty



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