

Creating your IoT REST API with **Strongloop** and **Loopback**

Miracle IoT Workshop | Miracle Innovation Labs



Understanding the API Economy

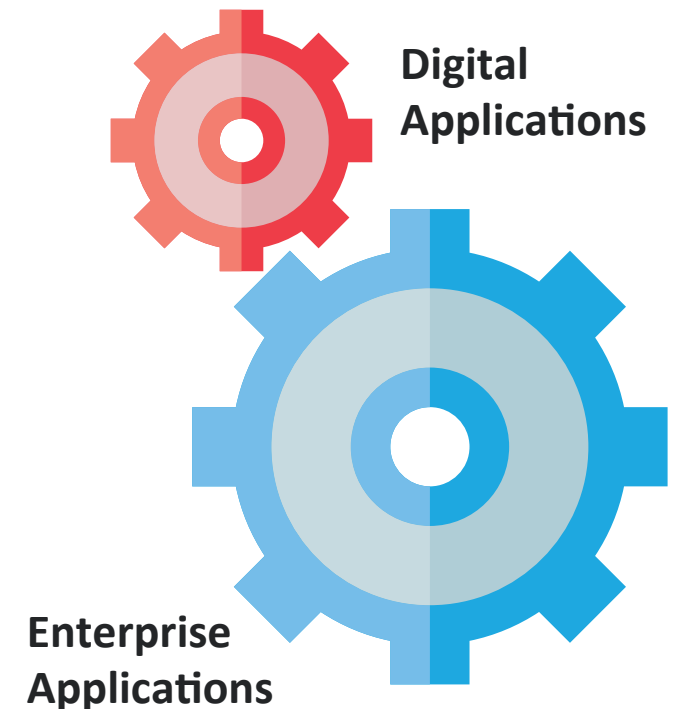
50 Billion Connected Devices that
can compute and communicate!

2-Speed IT for the Enterprise

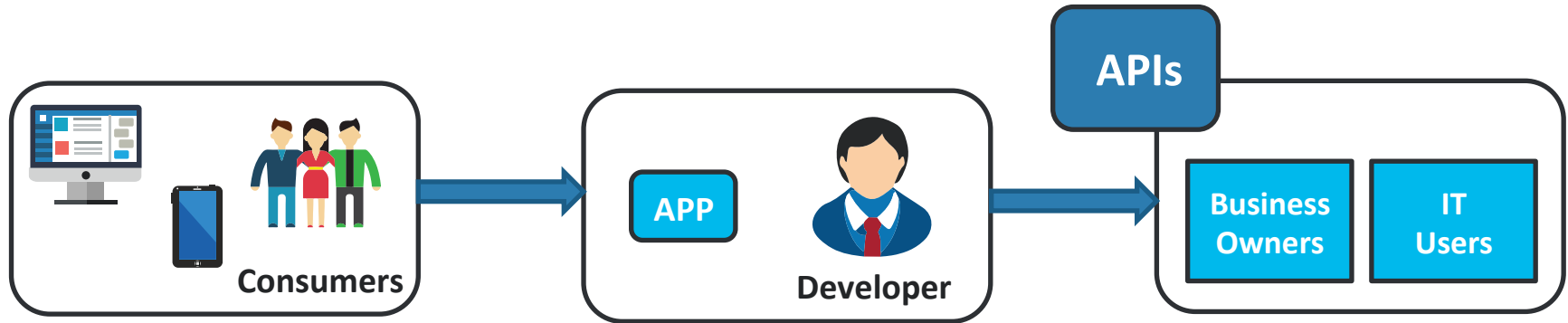
Today's Enterprise IT is divided into 2 different spheres of applications :

- **Digital Applications**
 - Rapid Change Cycles
 - Innovative Developers
 - DevOps and Agile Principles
- **Enterprise Applications**
 - Slow Change Life Cycles
 - Mission Critical Legacy Systems

DevOps helps enterprises to make changes to systems at **varied speeds** independently, but helps to ensure that both systems are **aligned** at required points.



Apps, APIs and Management



Benefits

- New Business Opportunities
- New Markets
- Increase Customers
- Enhance Branding
- Competitive Advantage

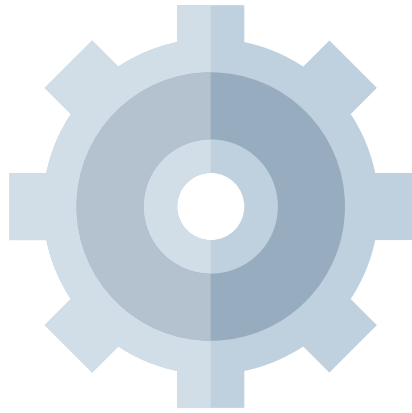
Extended Development Team

- Increase Innovation
- Increase Scale

Challenges

- Business Strategy
- Operational Control
 - Publish
 - Analyze
 - Monitor
- Infrastructure
 - Security
 - Creation
 - Scalability

Connectivity for **Innovation**



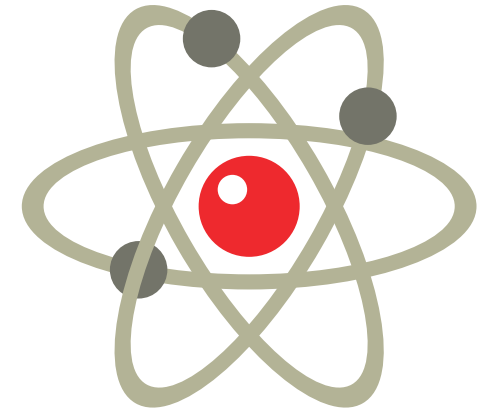
Internal Silos

Connecting Internal Silos for a Connected Experience for your employees



Business Partners

Expose your Data and Services to Partners to enhance the Self-Service Experience



External APIs

Expose and Monetize your services to unlock hidden business value with 3rd Party Developers

JavaScript as a Power Player



MongoDB



Express.js



Angular.js



Node.js

A Technology Stack based on with a much more unified approach to simplicity with **JavaScript** as the corner stone 😊

With **98%** of the web using JavaScript in some way (or) the other, **it is the future of programming for the Enterprise**

Introducing StrongLoop!

Compose, Deploy, Scale, Monitor and Manage APIs



API Composer
Visual modeling



Build and Deploy
Automate Lifecycle



Process Manager
Scale APIs



Performance Metrics
Real-time production monitoring



Profiler
Root cause CPU & Memory



Security
API Services Gateway

express  LoopBack



Lets go **Hands-On** with **Strongloop**

Follow Us and Let us know if you
need help 😊



#1 | Access Cloud9 and Create Space

- Login (or) Sign Up at <http://c9.io>
 - Create a new **workspace** and call it “StrongLoopSpace”
 - Select the **Node.js Template** when prompted
-
- Install **StrongLoop** with the following npm command,
npm install -g strongloop



#2 | Create the StrongLoop REST API

- Start by creating the Application Model with the command **slc loopback**
 - Remember your Directory/Application Name
- Navigate to your application with **cd <app-name>/server** and open the **datasources.json** file and add the Cloudant Connector details(JSON)
 - You can also use the GUI of Cloud9 to access the file
- Install **Cloudant Connector** with the **npm install loopback-connector-cloudant** command



#3 | Create the Loopback Model

- Create the loopback model by using the **slc loopback:model** command
 - Enter the Model Name
 - Select the Cloudant DB as your Data Source
 - Select the PersistedModel as the Base Class
 - Add your required properties for the model
 - For example add **cputemp** and **devicename** as String Types
- Run the StrongLoop API Explorer by using the command **node .** and open the link <http://0.0.0.0:8080/explorer> from the terminal



#4 | Add Loopback:Model to NodeRed

- For the flow to execute properly we must **add the loopbackModel name** to our NodeRed Flow
- Replace the function node with the following,

```
msg.payload = {"temp":msg.payload.d.cputemp,  
"loopback__model__name" : <Your Model Name>}
```

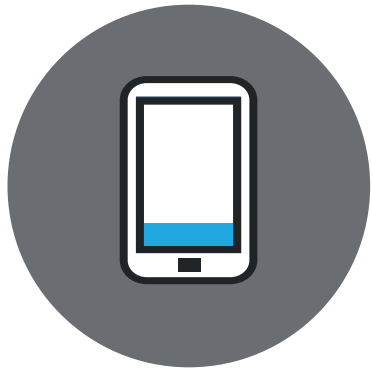
- **Go to the Explorer and test the GET Operation!**

Question and Answers Time!!

We're more than happy to help out

Reach Out! @Innovation

Give us a call @ **248-412-0425** (or) email us at innovation@miraclesoft.com



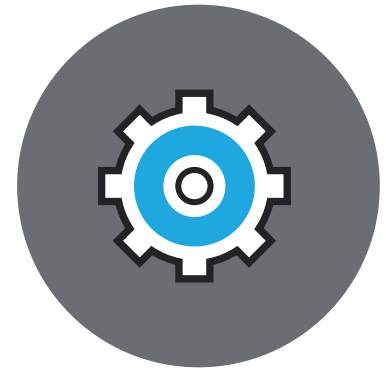
Enterprise Mobility
and NextGen Tech



DevOps, IoT and
Enterprise Cloud



Big Data and
Analytics



API Economy
and REST

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Thank You

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