Using the Mobile Foundation Bluemix service

Overview

This tutorial provides step-by-step instructions to set up a MobileFirst Server instance on Bluemix by using the **Mobile Foundation** service.
Mobile Foundation is a **Bluemix service** that enables quick and easy stand-up of scalable Developer or Production environments of MobileFirst Foundation v8.0 on **Liberty for Java runtime**.

The Mobile Foundation service offers the following plan options:

1. **Developer**: This plan provisions a Mobile Foundation server as a Cloud Foundry app on a Liberty for Java runtime. The plan does not support the use of external databases or define multiple nodes *and is restricted to development and testing only*. The server instance allows you to register any number of Mobile application for development and testing.

   > **Note:** the Developer plan does not offer a persistent database, as such be sure to backup your configuration as explained in the Troubleshooting section.

2. **Developer Pro**: This plan provisions a Mobile Foundation server as a Cloud Foundry app on a Liberty for Java runtime, and allows users to develop and test any number of mobile applications. The plan requires you to have a **dashDB OLTP service** in place. The dashDB service is created and billed separately. Optionally, you can add a MobileFirst Operational Analytics server, deployed on IBM Containers. The Container charges are billed separately. This plan is limited in size and is intended to be used for team-based development and testing activities, not production. Charges depend on the total size of your environment.
3. **Professional Per Capacity:** This plan allows users to build, test and run any number of mobile applications in production, regardless of the number of mobile users or devices. It supports large deployments and High Availability. The plan requires you to have a **dashDB OLTP service** in place. The dashDB service is created and billed separately. Optionally, you can add a MobileFirst Operational Analytics server, deployed on IBM Containers. The Container charges are billed separately. Charges depend on the total size of your environment.
4. **Professional 1 Application**: This plan provisions a Mobile Foundation server in a scalable Cloud Foundry app on a Liberty for Java runtime. The plan also requires a dashDB database service, which is created and billed separately. The plan allows users to build and manage a single mobile application. A single mobile application can consist of multiple flavors, such as iOS, Android, Windows, and Mobile Web.

> See the service page on Bluemix.net (https://console.ng.bluemix.net/catalog/services/mobile-foundation/) for more information about the available plans and their billing.

Jump to:

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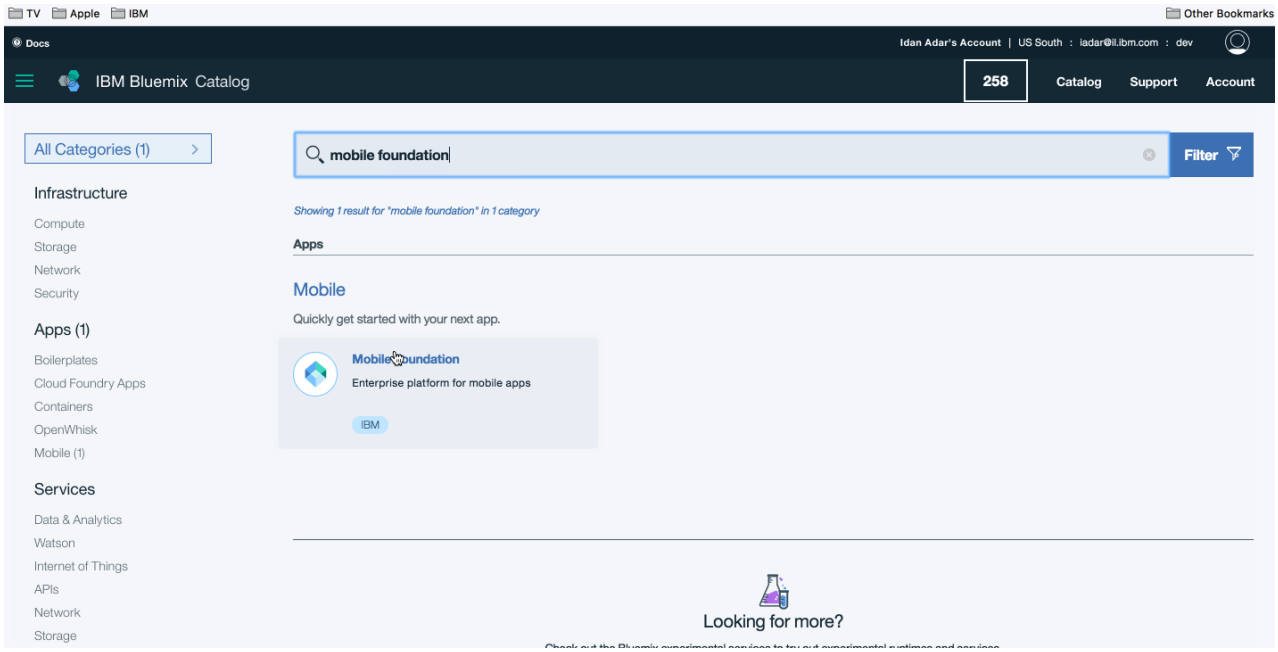
- Using the Mobile Foundation service
- Server configuration

- Advanced server configuration
- Adding Analytics support
- Applying MobileFirst Server fixes
- Accessing server logs
- Troubleshooting
- Further reading

Setting up the Mobile Foundation service

To set up the available plans, first follow these steps:

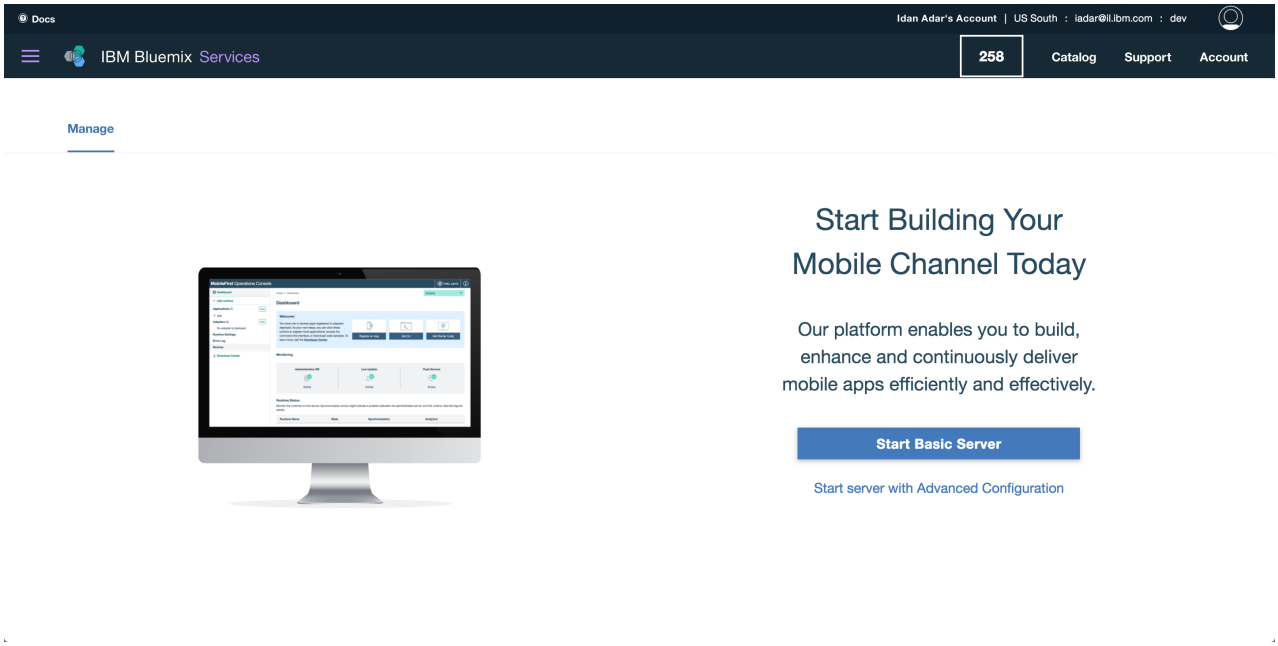
1. Load bluemix.net (http://bluemix.net), login, and click on **Catalog**.
2. Search for **Mobile Foundation** and click on the resulting tile option.
3. *Optional*. Enter a custom name for the service instance, or use the default provided name.
4. Select the desired pricing plan, then click **Create**.



Setting up the *developer* plan

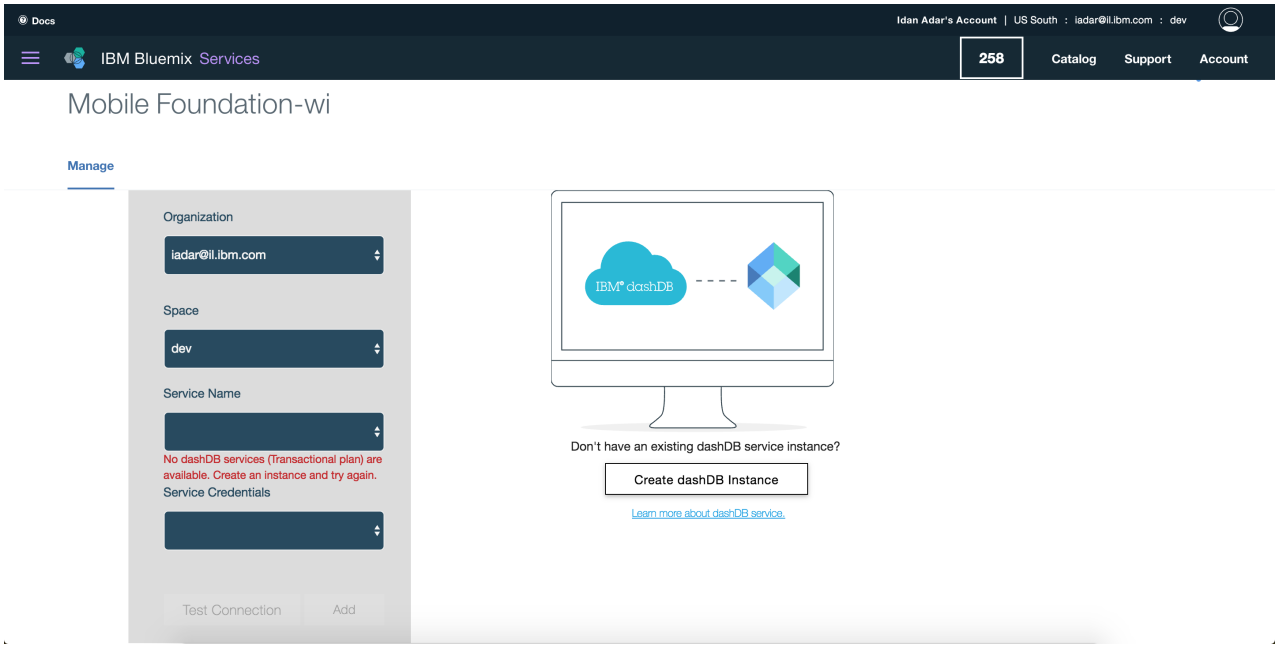
1. Start the MobileFirst Server.
    - You can either keep the server configuration at its basic level and click on **Start Basic Server**, or
    - Update the server configuration in the Settings tab, and click on **Start advanced server**.

    During this step a Cloud Foundry app is generated for the Mobile Foundation service, and the MobileFirst Foundation environment is being initialized. This step can take between 5 to 10 minutes.
2. With the instance ready, you can now use the service.



Setting up the *Developer Pro*, *Professional Per Capacity* and *Professional 1 Application* plans

1. The plan requires an external dashDB transactional database instance (https://console.ng.bluemix.net/catalog/services/dashdb/). After you have set up your dashDB OLTP *Transactional plan* instance (DashDB Enterprise Transactional 2.8.500 or Enterprise Transactional 12.128.1400), select your credentials in the plan entry page:



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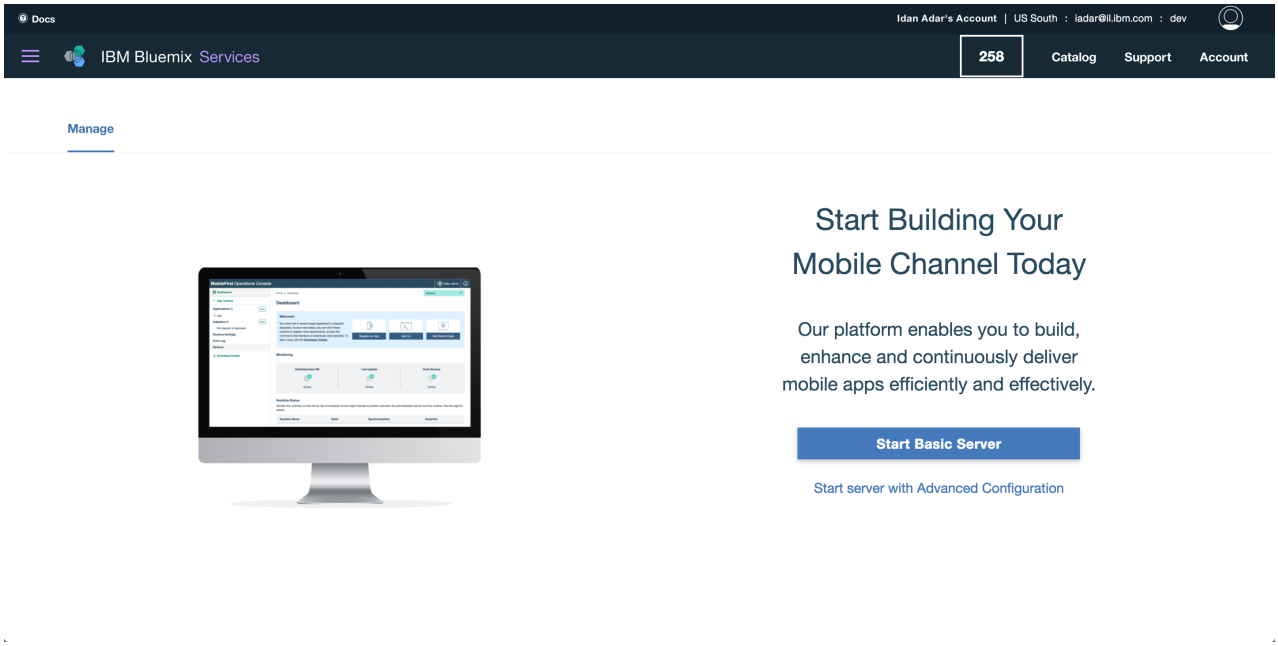
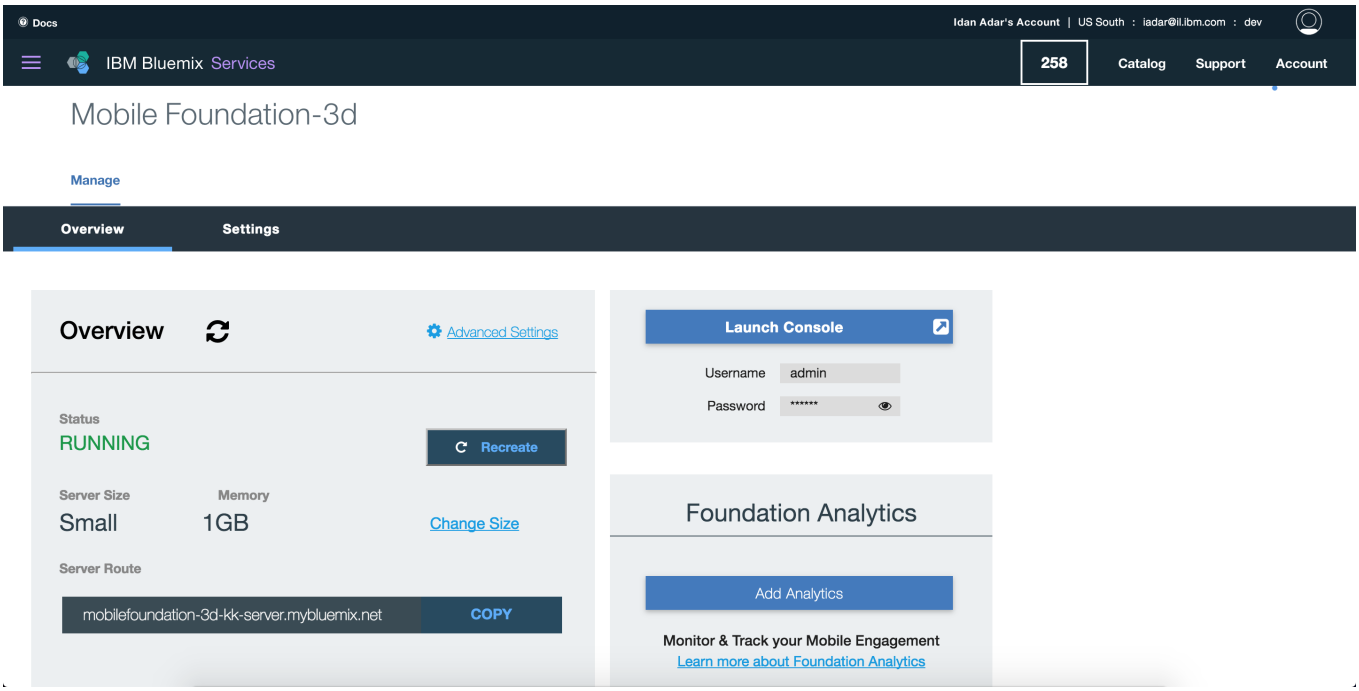


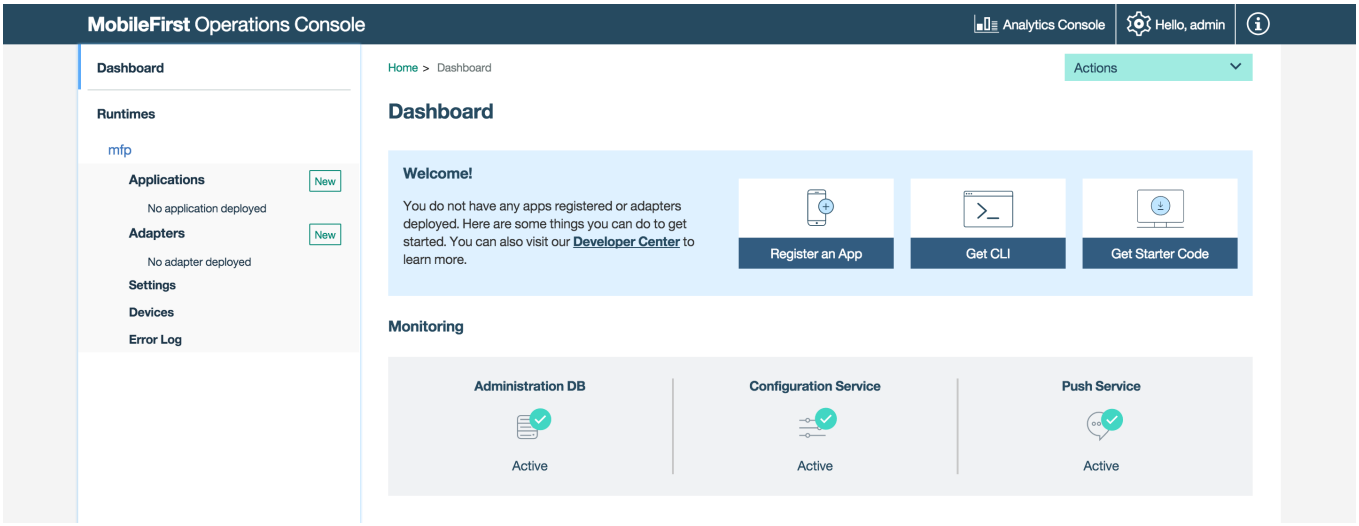
Using the Mobile Foundation service

With the MobileFirst Server now running, you are presented with the following Dashboard:



Click on **Add Analytics** to add MobileFirst Foundation Operational Analytics support to your server instance. Learn more in the Adding Analytics support section.

Click on **Launch Console** to open the MobileFirst Operations Console. The default user name is "admin" and the password can be revealed by clicking on the "eye" icon.



Server configuration

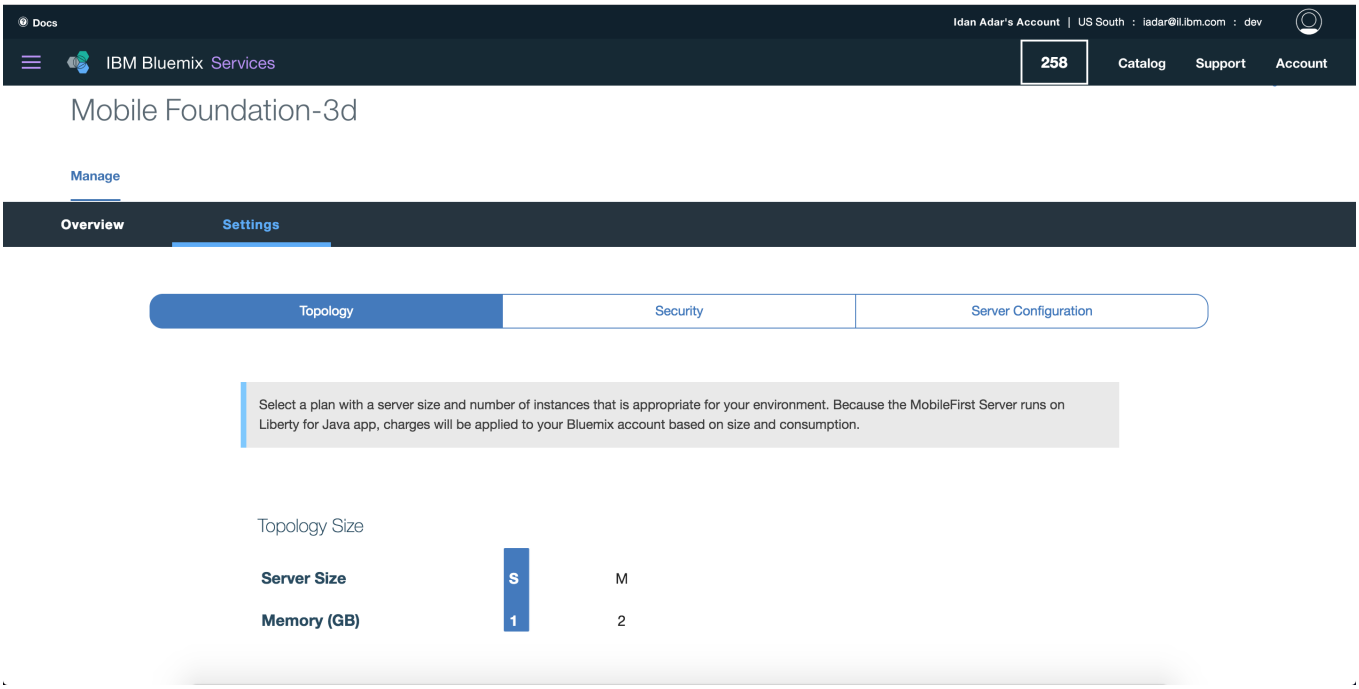
The basic server instance consists of:

- A single node (server size: "small")
- 1GB memory
- 2GB storage capacity

Advanced server configuration

Through the **Settings** tab, you can further customize the server instance with:

- Varying node, memory, and storage combinations
- MobileFirst Operations Console admin password
- LTPA keys
- JNDI configuration
- User registry
- TrustStore
- Operational Analytics configuration
- DashDB Enterprise Transactional 2.8.500 or Enterprise Transactional 12.128.1400 database selection (available in the *Professional 1 Application* plan)
- VPN



Adding Analytics support

You can add MobileFirst Foundation Operational Analytics support to your Mobile Foundation service instance by clicking on **Add Analytics** from the service's Dashboard page. This action provisions an IBM Container with an instance of MobileFirst Foundation Operational Analytics server.

- When using the **Developer** plan this action will also automatically hook the Analytics service instance to your MobileFirst Server instance.
- When using the **Developer Pro**, **Professional Per Capacity** or **Proffessional 1 Application** plans, this action will require additional input from you to select: amount of available Nodes, available Memory and a storage volume.

Once the operation finishes, reload the MobileFirst Operations Console page in your browser to access the Analytics console.

> Learn more about analytics in the MobileFirst Operational Analytics category (../../analytics).

Applying MobileFirst Server fixes

Updates to the Mobile Foundation Bluemix services are applied automatically without a need for human interverntion, other than agreeing to perform the update. When an update is available, a banner is displayed in the service's Dashboard page with instructions and action buttons.

Accessing server logs

To access server logs, open the sidebar navigation and click on **Apps → Cloud Foundary Apps**. Select your service and click on **Runtime**. Then click the **Files** tab.

You can find the **messages.log** and **trace.log** files in the **logs** folder.

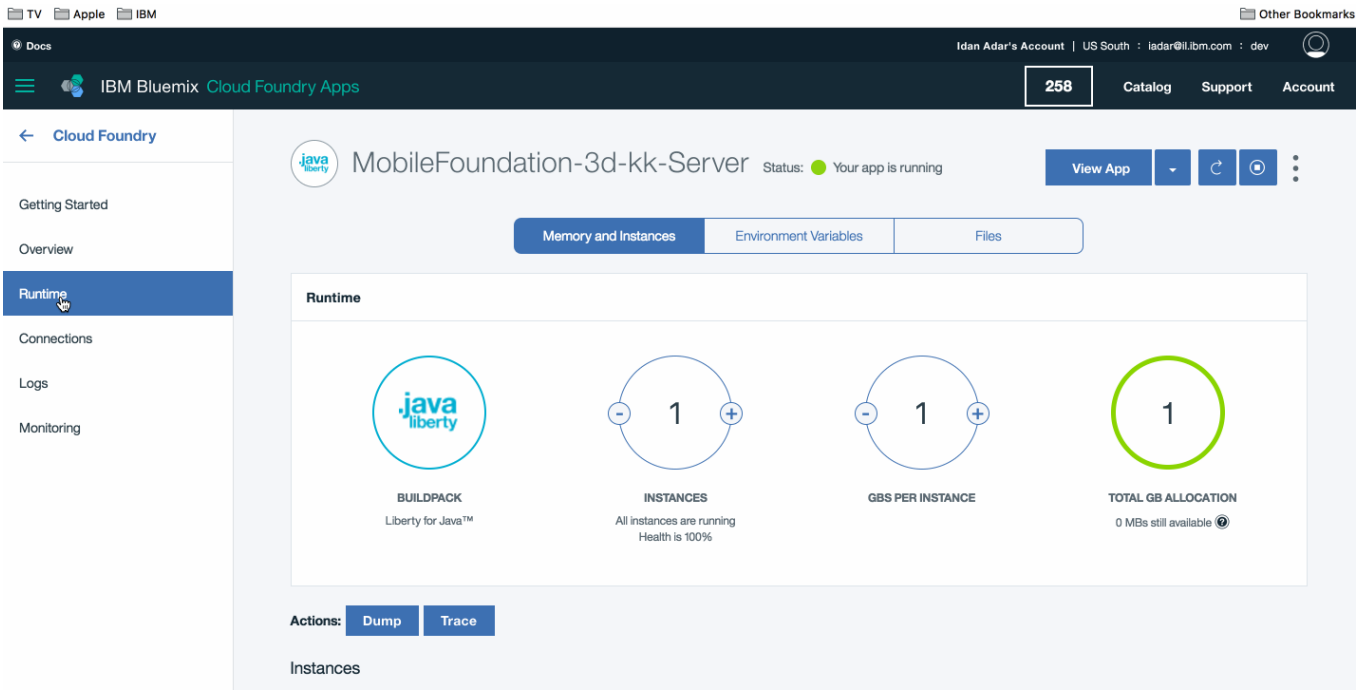
Tracing

To enable tracing, in order to view DEBUG-level messages in the **trace.log** file:

1. In **Runtime → Memory and Instances**, select your service instance (instance IDs start with **0**).
2. Click the **Trace** action option.

3. Input the following trace statement: `com.worklight.*=debug=enabled` and click **Submit trace**.

The **trace.log** file is now available in the above specified location.



Troubleshooting

The Developer plan does not offer a persistent database, which could cause at times loss of data. To quickly onboard in such cases, be sure to follow these best practices:

- Every time you make any of the following server-side actions:
  - Deploy an adapter or update any adapter configuration or property value
  - Perform any security configuration such scope-mapping and alike

  Run the following from the command-line to download your configuration to a .zip file:

  ```
  $curl -X GET -u admin:admin -o export.zip http://<App Name>.mybluemix.net/mfpadmin/management-apis/2.0/runtimes/mfp/export/all
  ```

- In case you recreate your server or lose your configuration, run the following from the command-line to import the configuration to the server:

  ```
  $curl -X POST -u admin:admin -F file=@./export.zip http://<App Name>.mybluemix.net/mfpadmin/management-apis/2.0/runtimes/mfp/deploy/multi
  ```

Further reading

Now that the MobileFirst Server instance is up and running:

- Familiarize with the MobileFirst Operations Console (../../product-overview/components/console).
- Experience MobileFirst Foundation with these Quick Start tutorials (../../quick-start).
- Read through all available tutorials (../../all-tutorials/).

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