

# Configuring Intellicus on Microsoft Azure

Version: 16.3

intellicus

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## **Acknowledgements**

Intellicus acknowledges using of third-party libraries to extend support to the functionalities that they provide.

For details, visit: <https://www.intellicus.com/product/documents/acknowledgements/acknowledgements-16-x/>

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# 1 Introduction

There is a global need for an intuitive web-based interactive interface to visualize and analyze large amounts of data. Intellicus helps organizations make better informed decisions with the help of our easy-to-use, self-serve reports and dashboards.

Intellicus' highly informative reports enable user interactivity and provide thrilling end user experience. Our intuitive, drag-and-drop UI enables you to customize reports according to your business needs and derive meaningful insights.

Intellicus is OWASP compliant and it follows industry standard testing methodology for the security of Web applications. It protects user's data from web based security vulnerabilities such as Cross-site scripting (XSS), SQL Injection etc. Intellicus is 3 Green star rated Web application by MicroFocus FOD (Fortify on Demand) security testing tool.

## Intellicus 16 Offerings

**Intellicus BI (Report) Server** is a highly scalable server that is capable of handling simultaneous reporting requests 24x7 without performance issues and delivering rich formatted reports in any of the offered formats. BI server has built-in reporting engine, OLAP engine, scheduling and delivery engine and data extraction and transformation engines. A very simple SOA (Service Oriented Architecture) that provides a high value to the complete organization's multifaceted BI needs.

**Intellicus Web Portal** provides web-based secure access to all Intellicus functionalities from end user reporting to data administration and monitoring. Navigation panel and Objects Explorer provide users quicker access to functionalities.

**Dashboards** collate multiple key performance indicators, drillable to detailed, richly designed graphical reports. Each end user gets a personalized and customizable view of dashboard, according to the business needs.

**Intellicus Studio** helps to design richly formatted graphical reports with pixel perfect alignment of data represented as charts, tables and matrices. Features like drill down, conditional formatting and alerting will improve your report viewing experience.

**Ad hoc Reporting** empowers your business end users to tweak their ad hoc reports according to emergent needs allowing decision makers to access required business facts in an agile fashion.

**Smart View** is a self-service tool to design smart reports with drag and drop actions for performing on-the-fly operations. It allows you to choose visualizations according to relationships between different data elements, and helps you uncover new patterns and insights. These include GIS maps, tree maps, heat maps, packed bubbles, funnel, counter, gauge, donut, scatter plot and other advanced visualizations.

**OLAP engine** provides a multidimensional data storage and pre-aggregation solution. Huge volumes of transactional data can be summarized on multiple dimensions at multiple levels.

**High Speed View** allows to build multi-dimensional cubes of data from multiple data sources. You can slice and dice the dimensions, drill through multiple levels and analyze your data for deeper business insights. With one click, Intellicus lets you burst open your cube in all possible dimensions, and lets you slice and dice all views at the same time.

**Heterogeneous Data Sourcing** of Intellicus lets you connect to multiple databases of your organization to correlate their data and prepare common cubes and reports from them.

**Scheduler** allows users to create recurring jobs to generate reports and deliver by email, print or publishing on FTP locations.

**Mobile Analytics Server** and iOS /Android application, combined together, provide the Reporting and Dashboard functionalities on popular mobile devices to decision makers for on-the-move access of required information in the required format.

## 2 Instantiating Intellicus on Microsoft Azure

This chapter provides information and steps to get you started with Intellicus on your cloud machine (Microsoft Azure) in the quickest way.

### Choosing and instantiating Intellicus from cloud based machine

Intellicus can be bought on hourly basis from the Azure marketplace and is not covered by any Azure credits you might have.

Login to the marketplace (<https://azuremarketplace.microsoft.com/en-us>) and search Intellicus.

Once you select Intellicus, you need to click 'Get It Now' to instantiate the Intellicus VM image.



The screenshot displays the Azure Marketplace page for 'Intellicus BI Server (5 Users)' by Intellicus Technologies Pvt. Ltd. The page layout includes a left-hand navigation pane with links for 'GET IT NOW', 'Pricing Information' (starting at \$0.30/hour plus Azure infrastructure costs), 'Categories' (Compute, Intelligence + analytics, Monitoring + Management), 'Support' (Support), and 'Legal' (License Agreement, Privacy Policy). The main content area features the Intellicus logo, a 'GET IT NOW' button, and a detailed description of the product as a powerful BI platform. It highlights features such as pixel-perfect reporting, ad-hoc reporting, OLAP and high-speed reporting, dashboards, and built-in ETL. A large image on the right shows a person interacting with a futuristic, curved digital display filled with various data visualizations like charts, graphs, and maps. Below this image are several small icons representing different use cases or integrations.

Figure 1: Intellicus on Azure Marketplace

Click 'Continue' to agree to the terms of use as shown in Figure 2.

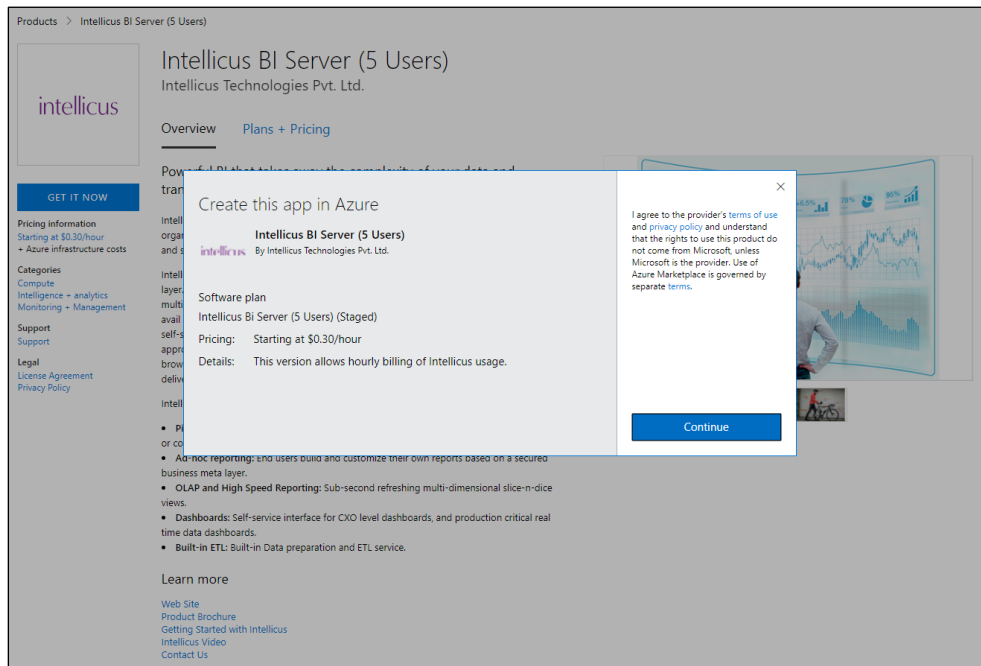


Figure 2: Create Intellicus application in Azure

Next, click 'Create' on Figure 3 after reading the application summary.

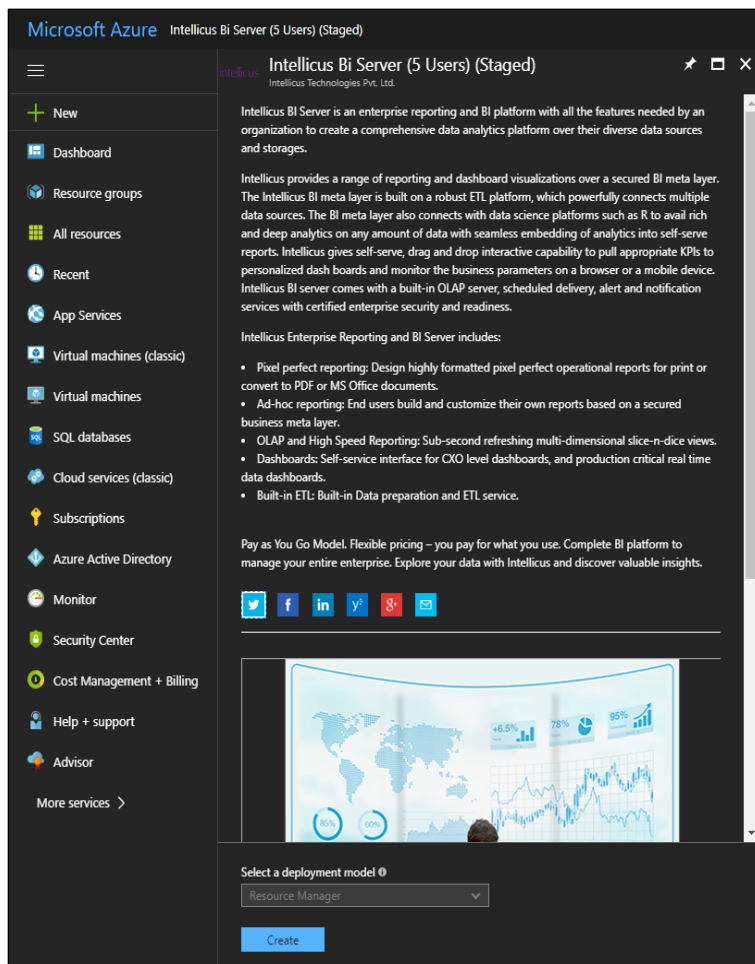


Figure 3: Select deployment model to create Intellicus application in Azure

You now need to configure the virtual machine to specify its name, disk type, user name/password, resource group etc. Click 'OK'.

The screenshot shows the 'Create virtual machine' dialog with the 'Basics' tab selected. The left sidebar lists various Azure services. The main panel shows the configuration steps and the 'Basics' configuration details.

Step	Configuration
1 Basics	Configure basic settings
2 Size	Choose virtual machine size
3 Settings	Configure optional features
4 Summary	Intellicus BI Server (5 Users) (St...

**Basics Configuration:**

- Name: Intellicus
- VM disk type: HDD
- User name: IntellicusTest
- Password: [Masked]
- Confirm password: [Masked]
- Subscription: Pay-As-You-Go
- Resource group: Intellicus\_RG
- Location: Central India

OK

Figure 4: Configure basic settings of virtual machine

Next, choose size of the virtual machine as shown in Figure 5. Click 'Select'.

The screenshot shows the 'Choose a size' dialog with three recommended sizes. The A2 Basic size is highlighted.

Size	vCPUs	Memory (GB)	Estimated Monthly Cost (USD)
A0 Basic	1	0.75	236.59
A1 Basic	1	1.75	252.22
A2 Basic	2	3.5	322.90

Select

Figure 5: Choose virtual machine size



You can optionally choose to configure high availability, storage etc. as shown in Figure 6 and click ‘OK’.

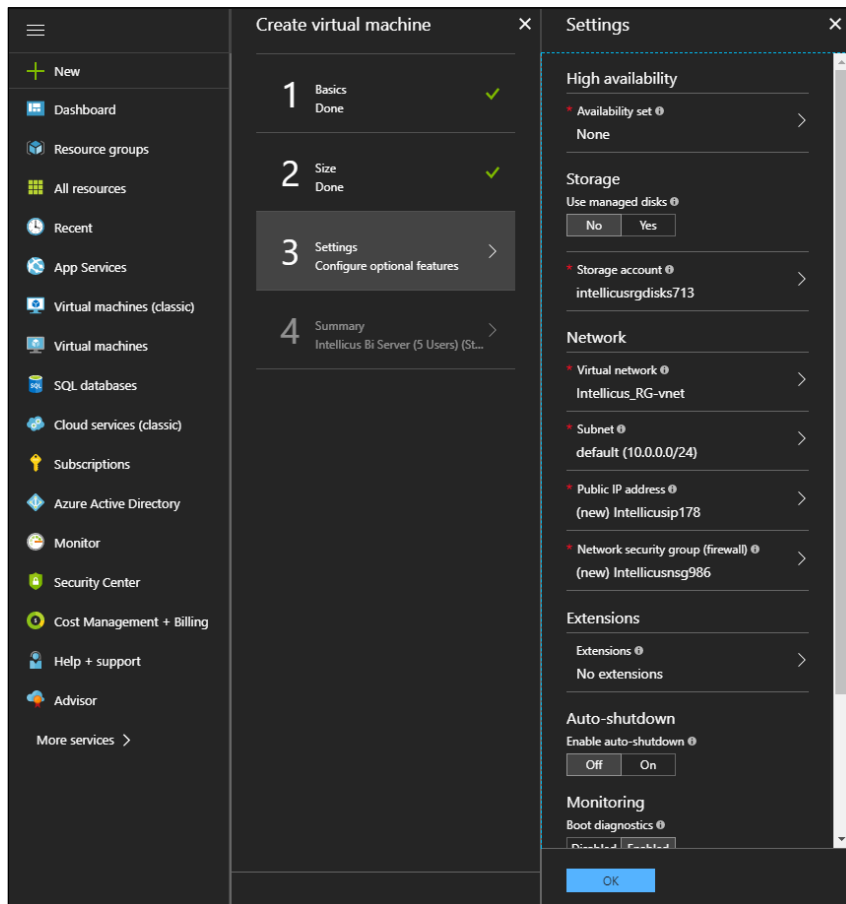


Figure 6: Configure optional features of virtual machine

Once you are done specifying the virtual machine settings, you can preview the summary. Click ‘Purchase’ to start Intellicus deployment.

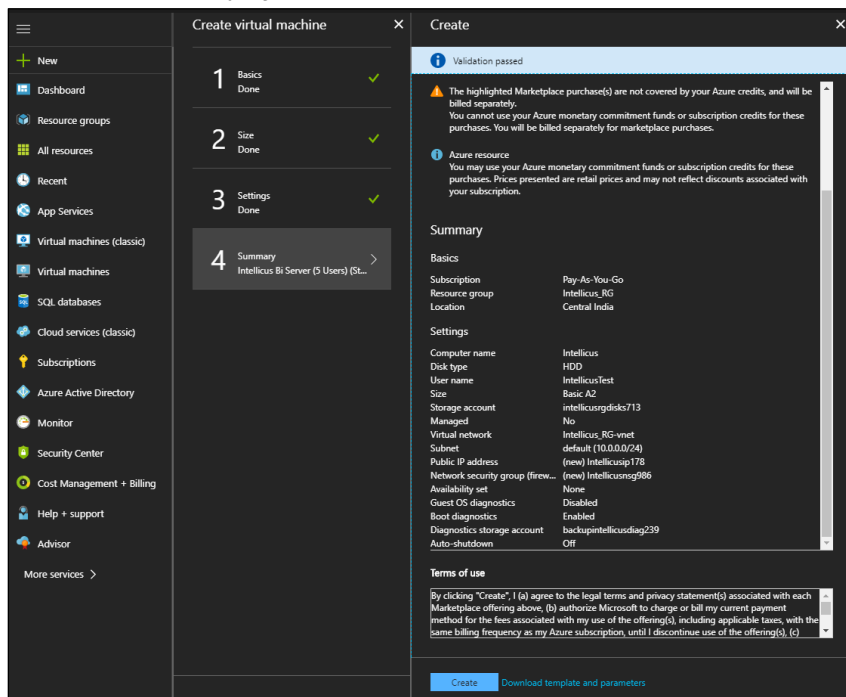


Figure 7: Summary preview of virtual machine

Once the deployment is successful, you can see the Public IP address that would be required to launch the Intellicus application.

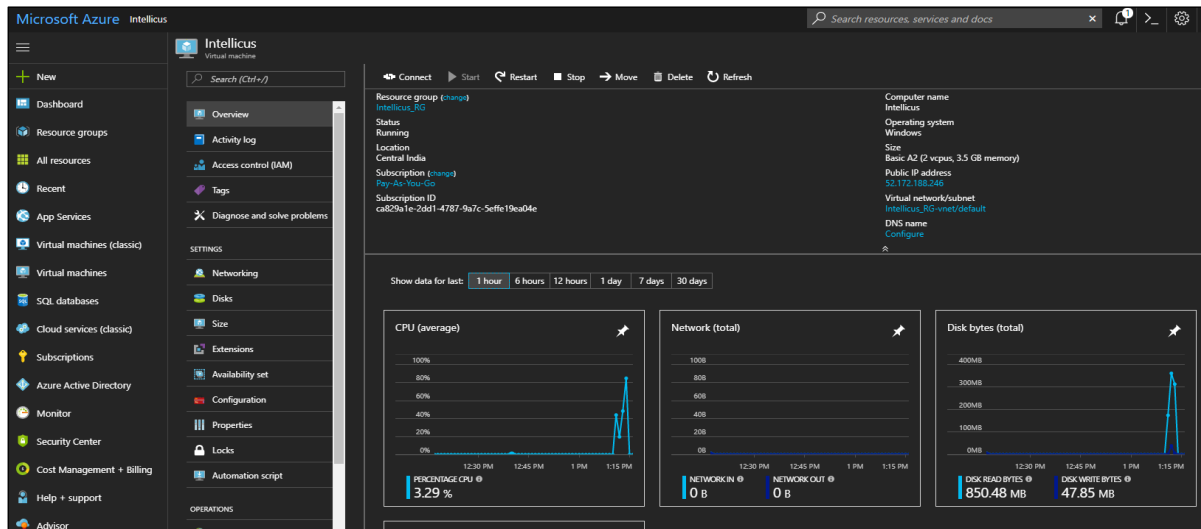


Figure 8: Successful Deployment of Intellicus

If you have chosen Windows based machine for deployment, Intellicus will be launched automatically as soon as the deployment completes. In case Intellicus does not start up on a Linux based machine, you need to manually start the application using the below commands:

```
cd Intellicus
```

```
./intellicus.sh start
```

In case of any difficulty instantiating Intellicus from marketplace, you can contact our support team ([support@intellicus.com](mailto:support@intellicus.com)) or download evaluation version from the web site: [www.intellicus.com](http://www.intellicus.com)

**Note:** You can stop the virtual machine during off-hours on Azure portal. While in the “Stopped” status, you will not be paying for the VM resources and Intellicus. The IP address required to launch Intellicus application might change on restarting the virtual machine on Azure.

## 3 Running Intellicus Instance on Azure

After you have initiated the VM, Intellicus service gets automatically started. You can directly access Intellicus application through your own machine (on premise or on cloud).

### Launching Intellicus Portal

#### Running Intellicus from User Machine

Intellicus provides browser based user interface. When VM has successfully launched, specify the Public IP address in your browser's address bar to launch Intellicus through user's machine:

`http://<Public IP address>:<Port>/intellicus`

For example, if your IP address is '52.102.198.35', you can use below links:

`http://52.102.198.35:80/intellicus`

`https://52.102.198.35:8443/intellicus`

At present, self-signed certificate (https certificate) is available on Intellicus application. But you can deploy your own purchased certificate, if required.

#### Running Intellicus from VM Machine

Apart from this, you can also browse Intellicus application by clicking the portal shortcut available under C:\Program Files\Intellicus of running VM machine.

### Intellicus URL Password

Below are the default credentials provided by Intellicus:

- User Name: Admin
- Password: Admin
- Organization Name: Intellicus  
(Click "More Option" if you wish to select any organization other than the default.)

It is mandatory to change default password of Intellicus URL.

**NOTE:** You can change default password once logged onto Intellicus application (from My Preference page).

To explore and evaluate all the features of Intellicus, login using Admin / Admin user name and password combination. The below screen enables you to login to the application.

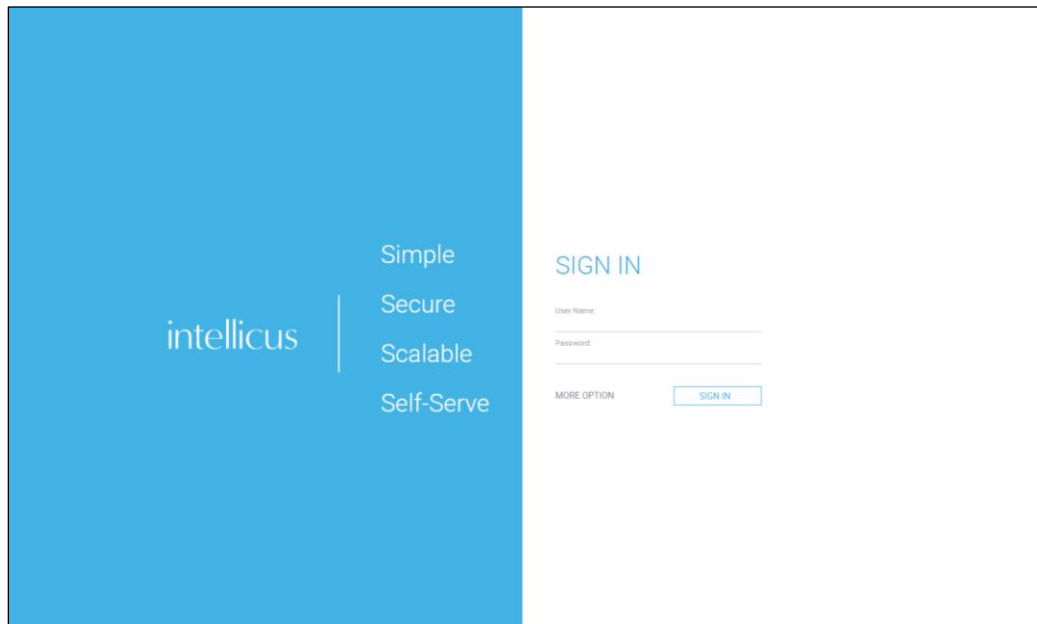


Figure 9: Intellicus login page

In case Intellicus URL begins with "https://", port 8443 is used by default; while URL beginning with "http://" uses port 80 by default.

## Changing the Default Port number

Below is the information on how to change the port number when Jakarta Web Server is used.

The port number information is stored in server.xml file.

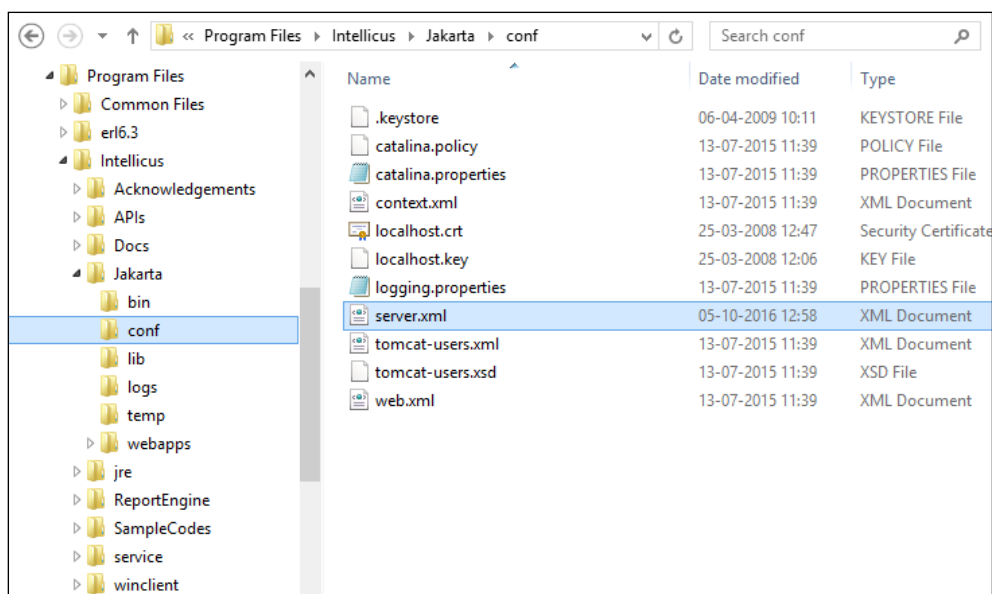


Figure 10: Location of server.xml

To change the port number:

- Open server.xml in a text editor.
- Change the value of **Connector port** to a number that is free.
- Save the changes.

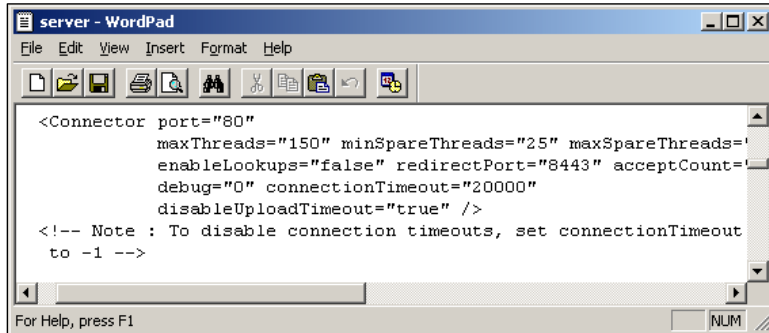


Figure 11: Changing the port number

**NOTE:** If you are planning to change existing default ports, it is mandatory that such ports should be accessible to outside network.

After successful login, the following Home Page appears:

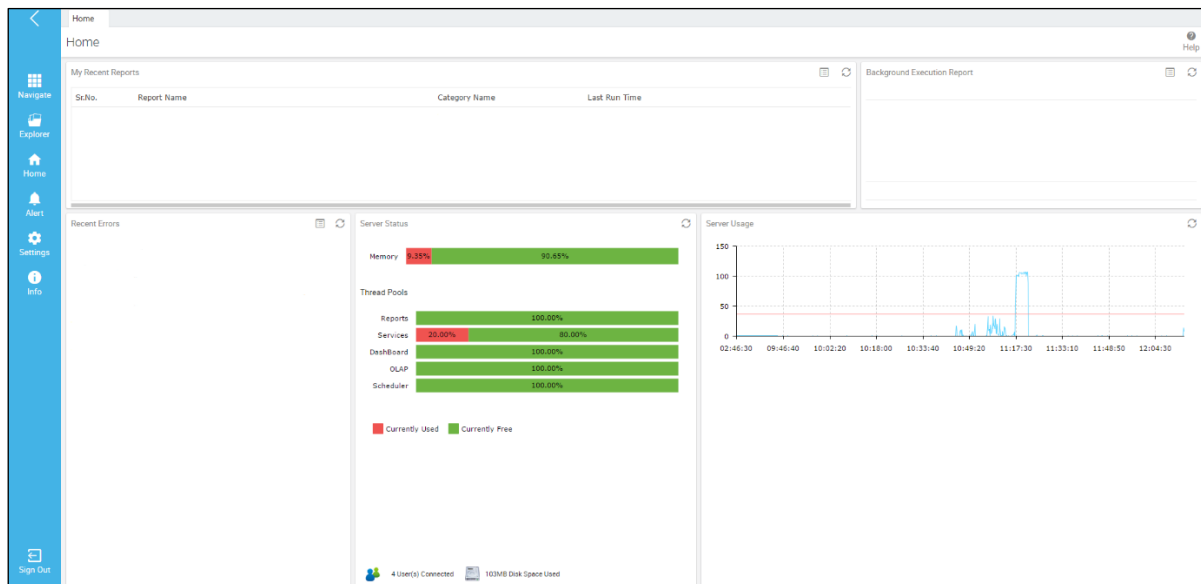


Figure 12: Home page for the Admin user

## 4 Delving into Intellicus features

Intellicus on cloud installation includes a limited demo data which you can use to get a feel of Intellicus features. But, you can use your own data and perform analytics on it.

Explore what you can do on portal

Listed below are some of the portal pages you may wish to explore.

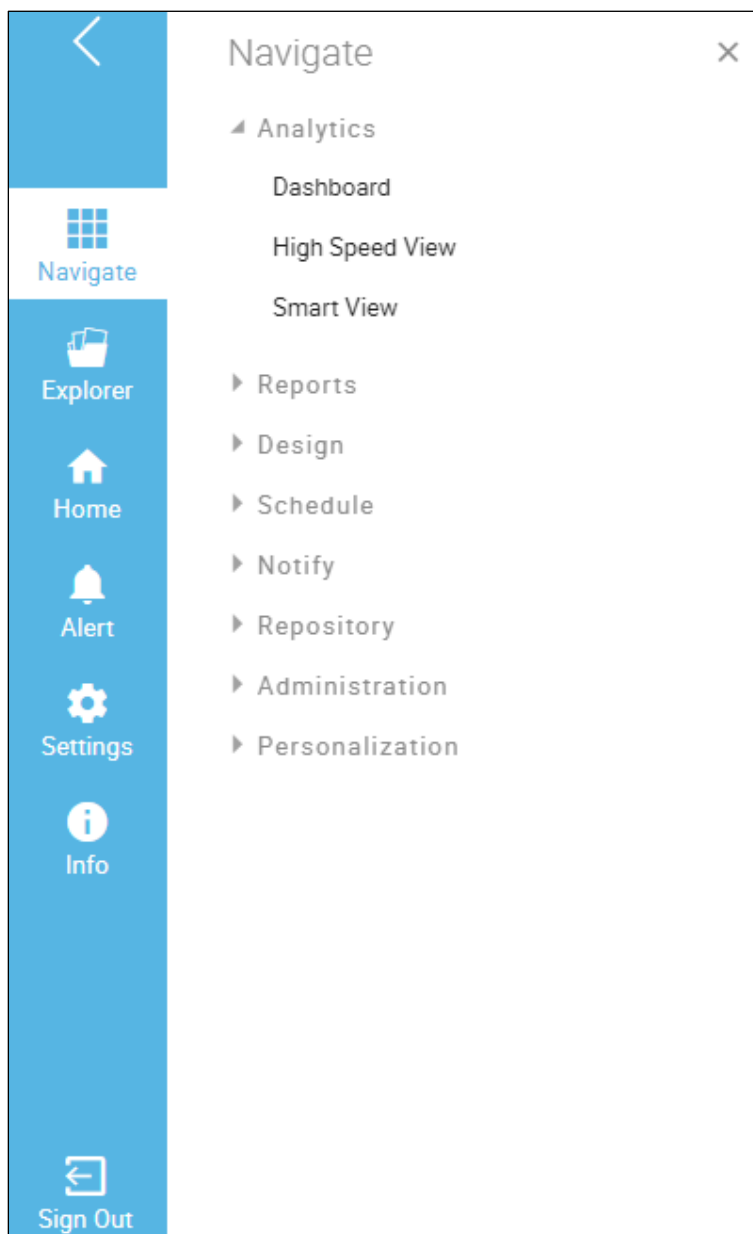


Figure 13: Intellicus Menu

## Connecting to User Data/Database

**Database Connections:** Navigate > Administration > Configure > Databases

Intellicus supports most of the widely used databases as listed below:

- Oracle
- MS SQL Server
- MySQL
- PostgreSQL
- Sybase
- Cache DB
- ODBC (for Excel Data Source)
- DB2
- Hadoop
- HIVE
- HBASE
- IMPALA
- HP Vertica
- H2
- Greenplum
- Aster Data
- Teradata
- Amazon EC2
- Cassandra
- MongoDB
- SQLite
- Elastic Search
- Files/Stream (S3, FTP, Kafka, SAX, Google Sheet)
- Web Service (REST & SOAP)
- Social Media (Twitter)
- Amazon Redshift

Intellicus uses set of third-party libraries to extend support to the functionalities that these provide. Therefore, you need to provide these library files manually using 'Add' button under Database Connection page. To know more, refer [\*WorkingwithDatabaseConnections.pdf\*](#)

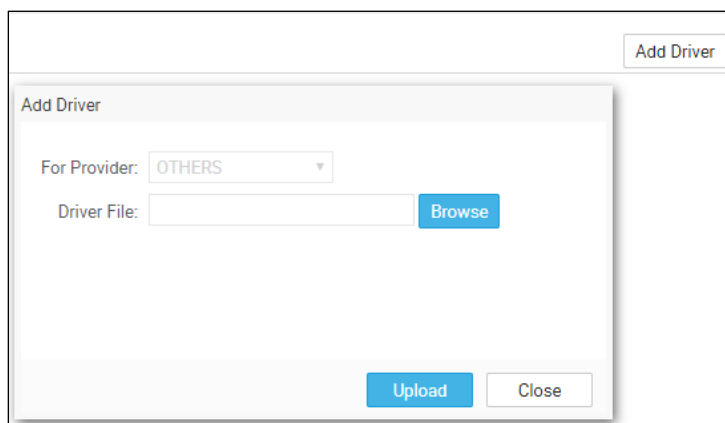


Figure 14: Add Driver

The details of library files are available under [acknowledgements.html](#).

## On Premise/Cloud Database

Intellicus is empowered to connect with the databases if running on cloud or on premises.

There should be network connectivity between your database and Intellicus to perform reporting and analytics, if your database resides on premise.

Similarly, on cloud database, relevant database ports should be made available so that proper connection can be established.

## Analytics on User Data (CSV or Excel)

### CSV as data source

You can also perform analytics on your own CSV data by uploading the file (zipped/unzipped) to Intellicus. - This can be achieved using the Query Object Designer on Intellicus portal as shown in Figure 15.

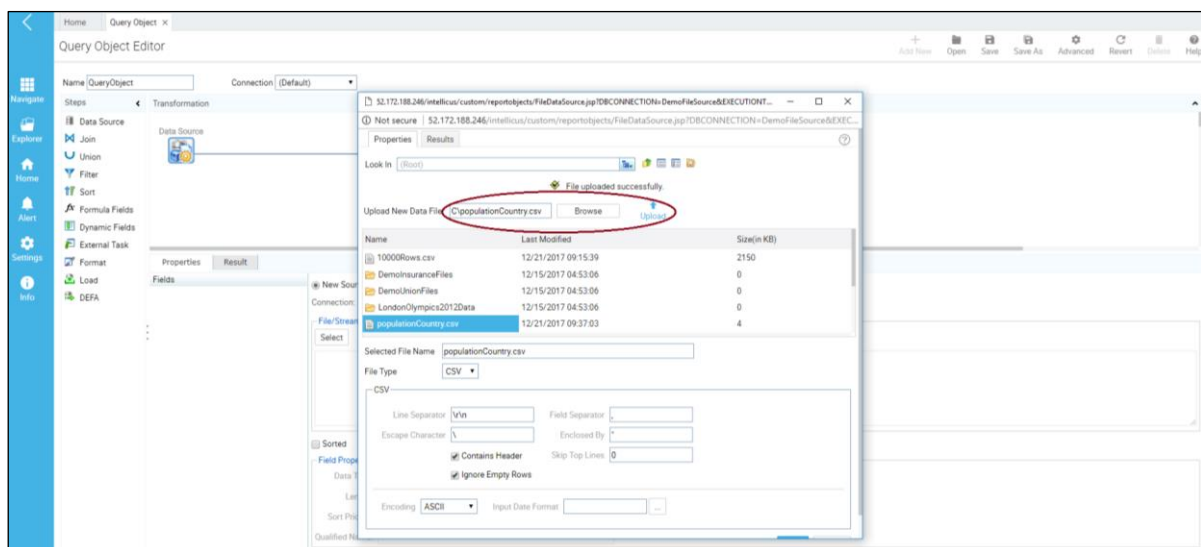


Figure 15: Upload CSV File in Intellicus

**Note:** To upload more than 10 MB CSV file, you need to make sure that `IS_DIRECT_UPLOAD` property should be set as 'true' in `ReportClient.properties` file available at `\Intellicus\Jakarta\webapps\intellicus\client\config`



## Excel as data source

Apart from CSV, you can also perform analytics if user data resides in Excel sheet format. Please refer below steps for creating an ODBC connection:

1. Go to Control Panel -> Administrative Tools.

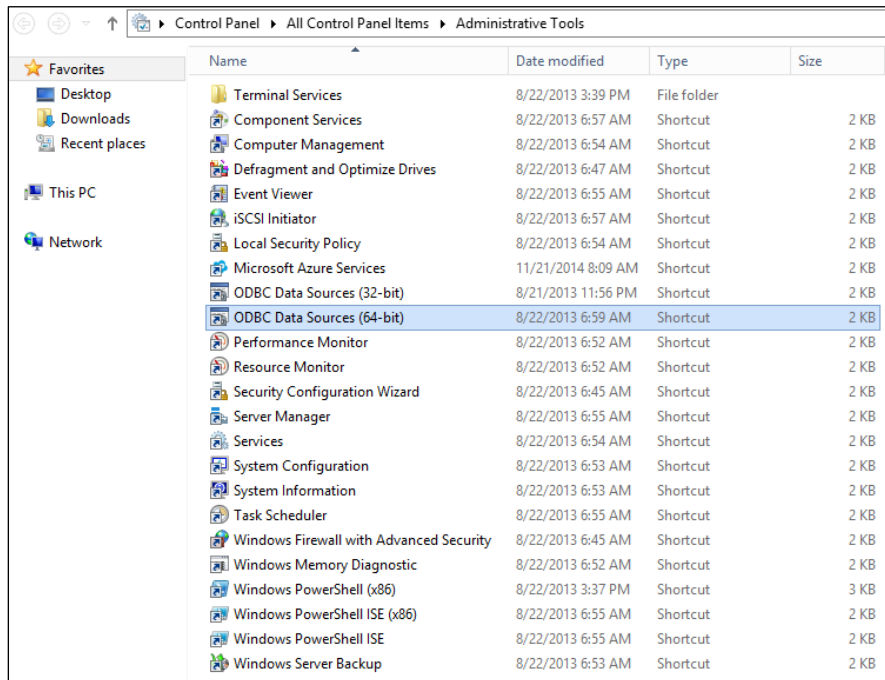


Figure 16: Administrative Tools

2. Open ODBC Data Sources (64-bit) and go to System DSN -> Click Add -> Select a driver for which you want to set up a Data Source. Provide DSN Name and select the workbook. Click OK.

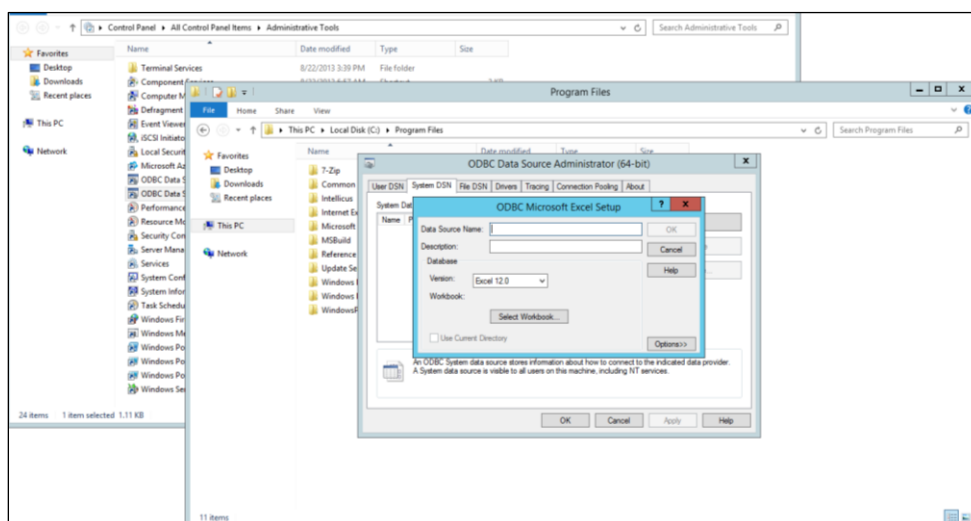


Figure 17: ODBC setup

3. Login to Intellicus and go to Navigate -> Administration -> Configure. Click the Add button on Databases tab and provide all required details for ODBC Connection and save the connection.

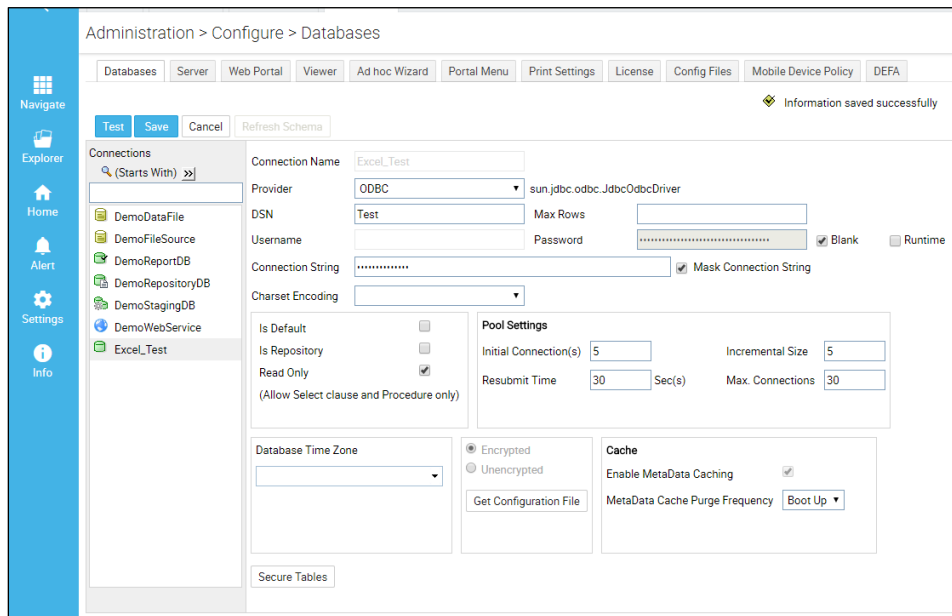


Figure 18: Configure Database

4. Go to Navigate -> Design -> Query Object to select Data Source and ODBC connection. Click SQL Design.

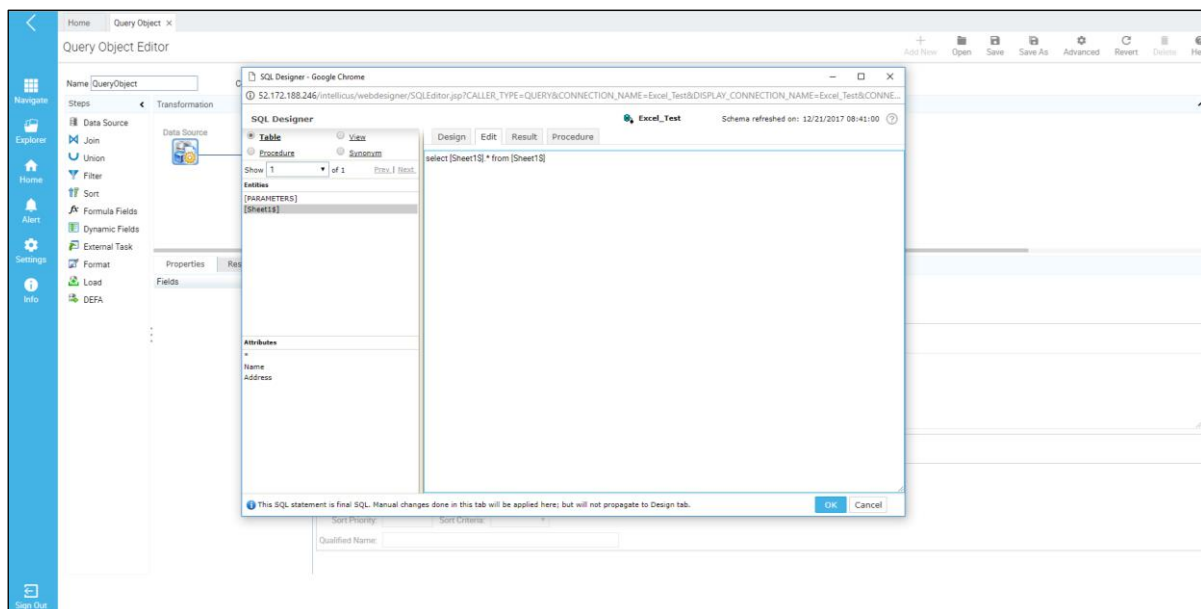


Figure 19: Select ODBC connection

5. Go to Edit tab and write SQL query having Sheet name as table name followed by a “\$” symbol as follows (like Select \* from [Sheet1\$]):
6. Click OK and save the Query Object.
7. Use the Query Object for creating different reports.

## Exploring Intellicus Features

**Query Objects / Data Sources:** Navigate > Design > Query Object

Query Objects form the business meta-layer for end user reporting. Query Objects hide the physical database details, SQL complexities, table names etc. from the end user.

A query object contains details to fetch desired data from a data connection. A query object acts as a data source to reports, parameter and analytical objects.

(For details, refer [WorkingwithQueryObjects.pdf](#))

**Smart Report:** Navigate > Analytics > Smart View

A self-service tool to design reports with drag and drop actions for performing on-the-fly operations.

Get contemporary style of web controls like dynamic data grids and various charting options for data depiction.

(For details, refer [ConfiguringAdhocReporting.pdf](#), [WorkingwithSmartView.pdf](#))

**High Speed Report (OLAP Reports):** Navigate > Analytics > High Speed View

Intellicus’ evolved multi-dimensional analytics to let you explore your data from all dimensions in a single screen to get a panoramic view of your business at the speed of your thought.

(For details, refer [WorkingwithHighSpeedView.pdf](#))

**Ad hoc Reports –customization and report design:** Navigate > Administration > Configure > Ad hoc Wizard, Navigate > Design > Ad hoc Template, Navigate > Design > Ad hoc Report, Navigate > Analytics > Smart View

Ad hoc reporting feature brings report design functionalities from designers to the users. Users can not only view report output, but also study and analyze the output by carrying out a number of analysis activities like sorting, grouping and filtering the output without returning to the designer screen.

(For details, refer [ConfiguringAdhocReporting.pdf](#), [DesigningAdhocReports.pdf](#))

**Running Reports:** Explorer > expand category > right click the report > select the Run Report option

Intellicus provide facility to run a report in different formats. Apart from this you can also schedule (using Quick Schedule and Batch Scheduling option) and view results later on.

(For details, refer [RunningReportsInIntellicus.pdf](#), [BatchScheduler.pdf](#))

**Dashboards:** Navigate > Design > Dashboard Widget, Navigate > Analytics > Dashboard

To visualize your business data at a glance, monitor overall performance and make informed business decisions.

*(For details, refer [CreatingDashboardWidgets.pdf](#), [WorkingwithDashboards.pdf](#))*

**Batch Scheduler:** Navigate > Schedule > Jobs

Scheduling of reports is very helpful for better utilization of server and printer resources.

*(For details, refer [BatchScheduler.pdf](#))*

**Configurations:** Navigate > Administration > Configure

You can configure properties related to Report Server and Client (portal) as well as configure email templates and customize configuration files.

*(For details, refer [ConfiguringIntellicus.pdf](#))*

**Favorites:** Explorer > expand category > right click the object > select the **Add to favorites** option

**Standard Reports:** Intellicus standard reporting enables you to create pixel-perfect, form style and printable format reports to support your organization's operational tasks. An enterprise-grade scheduler and dispatcher of Intellicus helps you distribute the soft copies to thousands of users without manual intervention.

You need to use Intellicus Studio to design and deploy standard reports. In Windows, click Windows Start > All apps > Intellicus > Studio to start the Studio application.

*(For details, refer [DesktopStudio-ATour.pdf](#))*

## Mobile Analytics

Intellicus Mobile BI takes your reports and analytics to tablets and phones, on both Android and iOS platforms. Our mobile analytics solution delivers instant access to your important business insights.

You can perform ad hoc and multidimensional analysis on the move with or without internet connectivity. Intellicus Mobile lets you update data when online, interact and analyze while offline.

To achieve business analytics on mobile devices, follow the below steps to install and start using Intellicus Mobile.

1. Go to Play Store (for android devices) or App Store (for iOS devices).
2. Search Intellicus and tap “Install”.  
You will see the memory required to install Intellicus application.
3. After opening the application, you would be prompted to enter the server address where your Intellicus web application is running along with the Username/Password.
4. You can now see the Home screen of Intellicus Mobile as shown in Figure 20. This lists the entities as Smart View (for analyzing query objects), Reports (for viewing smart, standard, ad hoc and OLAP reports), High Speed View (For viewing and analyzing cube objects) and Dashboards (for viewing dashboards).

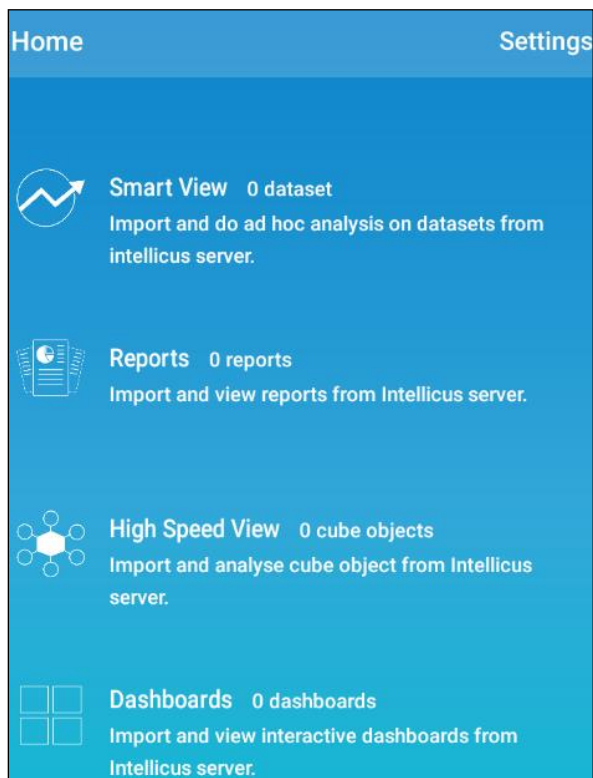


Figure 20: Home page of Intellicus Mobile

- Next, you have to import/subscribe datasets, reports, cube objects or dashboards already created in Intellicus web application.

Tapping Smart View would list the datasets you can choose to import as shown in Figure 21.

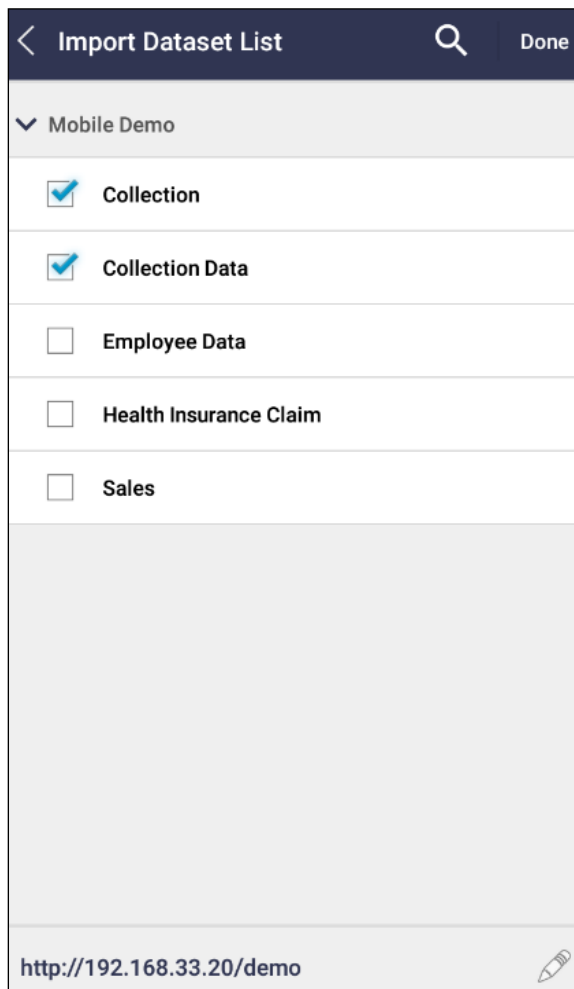


Figure 21: Import Dataset in Smart View

Select the datasets to import. This would import the selected datasets from Intellicus server to the mobile application.

6. You can choose to browse, analyze or update the dataset on tapping the selected dataset.

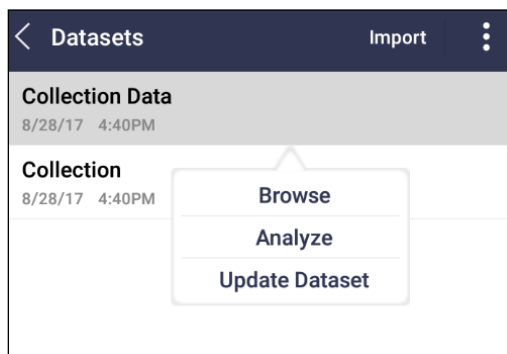





Figure 22: Actions on Dataset

Tap "Browse". The data in the grid appears as shown in Figure 23.

State	City	Depart...	Revenu...	Collecti...
Washi...	Albion	Food &...	Tax on...	01/11/...
Washi...	Bucoda	Agricult...	Tax on...	01/11/...
Washi...	Bucoda	Agricult...	Tax on l...	01/11/...
Washi...	Bucoda	Excise	Tax on...	01/11/...
Washi...	Bucoda	Home	Fees on...	01/11/...
Washi...	Bucoda	Tourism	Fine on...	01/11/...
Washi...	Coupe...	Food &...	Fine on...	01/11/...
Washi...	Coupe...	Home	Fine on...	01/11/...
Washi...	Coupe...	Tourism	Tax on...	01/11/...
Washi...	Darrin...	Food &...	Tax on...	01/11/...
Washi...	Darrin...	Public...	Fine on...	01/11/...
Washi...	Eaton...	Home	Fine on...	01/11/...
Washi...	Farmi...	Tourism	Tax on...	01/11/...
Washi...	Friday...	Excise	Tax on l...	01/11/...
Washi...	Friday...	Public...	Excise...	01/11/...
Washi...	Friday...	Tourism	Tax on...	01/11/...

At the bottom center of the screen, there is a gear icon for settings.

Figure 23: Grid visualization on Smart View

7. Tap the gear button  at the bottom  the screen (Figure 23) to choose the fields that should appear on Smart View. Tap and move  to reorder the fields.

For detailed analysis, you can apply grouping, filtering, totaling, sorting etc. on the chosen dataset.

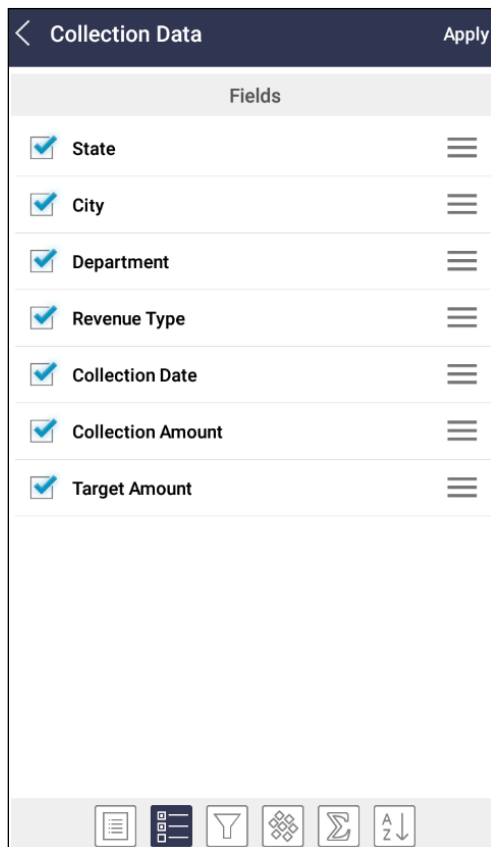


Figure 24: Grid operations on Smart View



8. You can also analyze your data in the form of charts by tapping the “Analyze” option on Figure 22. Intellicus enables to choose from a wide variety of charts to build visually rich reports on your mobile device.

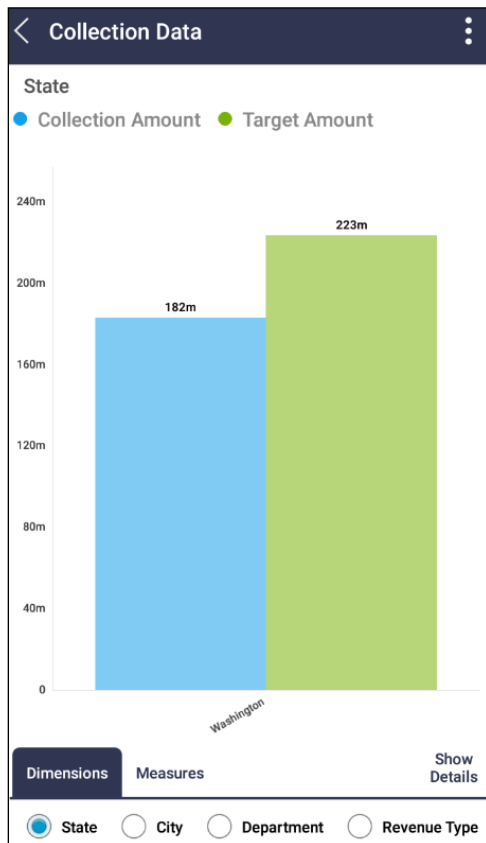






Figure 25: Chart visualization on Smart View

You can save the Smart View at any time while browsing or analyzing the data. Tap the ellipsis icon  on an android device or  on an iOS device to choose the option to save the view.

9. Tapping “Update Dataset” on Figure 22 fetches the recent dataset from the server.
10. You can choose the below operations to perform on the dataset listing.
  - Import: To import more datasets from Intellicus server. Tap “Import” on an android device or iOS device to select the import option.
  - Update All: To fetch all the recent datasets which have been listed from Intellicus server. Tap the ellipsis icon  on an android device to select the “Update All” option.
  - Manage or Edit: Tap the ellipsis icon  on an android device to either delete or update the individual dataset from the server. Alternately, you can tap “Edit” on an iOS device to delete a dataset.

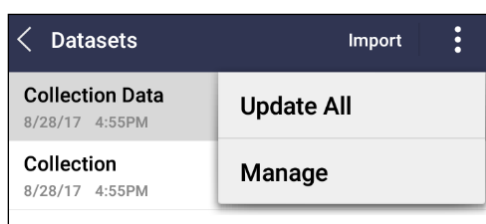


Figure 26: Operations on Dataset listing

11. Similarly, analysis can be done on smart, standard, ad hoc and OLAP reports by tapping “Reports” on the Home screen.
12. Intellicus High Speed Reports extend to mobile devices. Tap “High Speed View” to subscribe and analyze cube object from Intellicus server. Tap “Subscribe” to import cube objects from Intellicus server.
13. Select a cube object and tap “View” to view and analyze as shown in Figure 27.

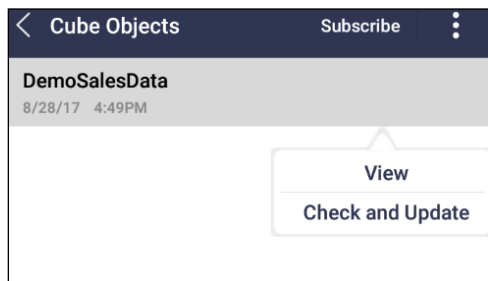


Figure 27: Cube Objects' operations

On viewing the cube object, you see the measures and dimensions on the High Speed View as shown in Figure 28.

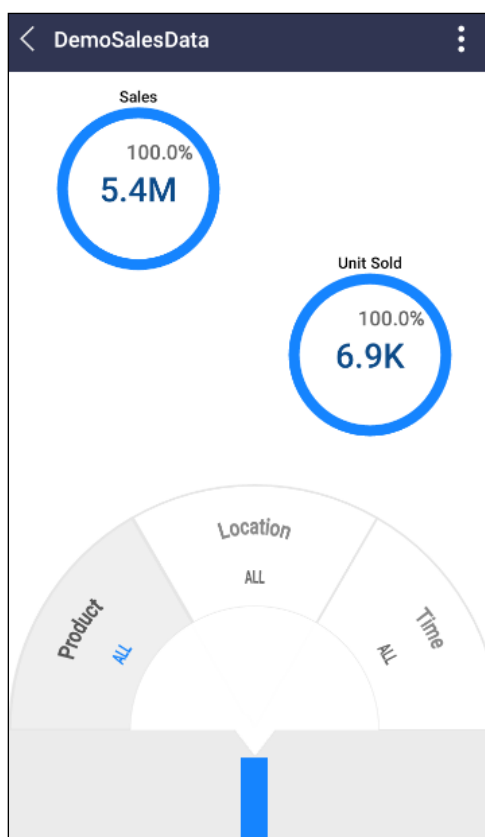


Figure 28: High Speed View

You can swipe the screen or spin the wheel in case of more than measures or dimensions that can fit the screen. If you have only 2 dimensions, 1 dummy dimension gets added to the wheel.

You can select specific dimension values on the dimension wheel to view their corresponding measure values and percentiles as shown in Figure 29.

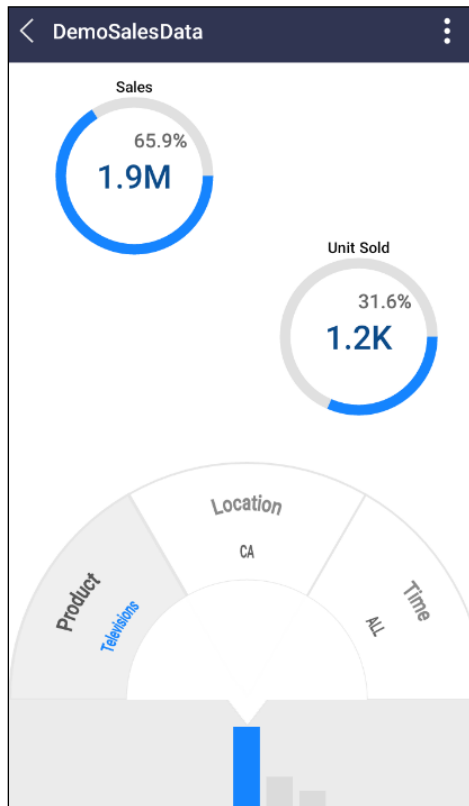


Figure 29: Specific Dimension selected on High Speed View

Tapping “Check and Update” on Figure 27 checks if the selected cube has been rebuilt since last fetched and thereby fetches the recent cube data from the server.

14. Tap “Dashboards” on the Home screen to import and view Intellicus’ interactive dashboards. Tap the “Import” button to import the already created dashboards from Intellicus server. Once imported, you see the dashboard listing on the mobile device. Select a dashboard and tap “View” to see the dashboard.

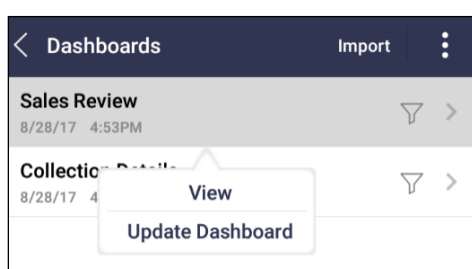


Figure 30: View Dashboard on mobile device

The dashboard appears as shown in Figure 31. The widgets can be scrolled up and down using the arrows.

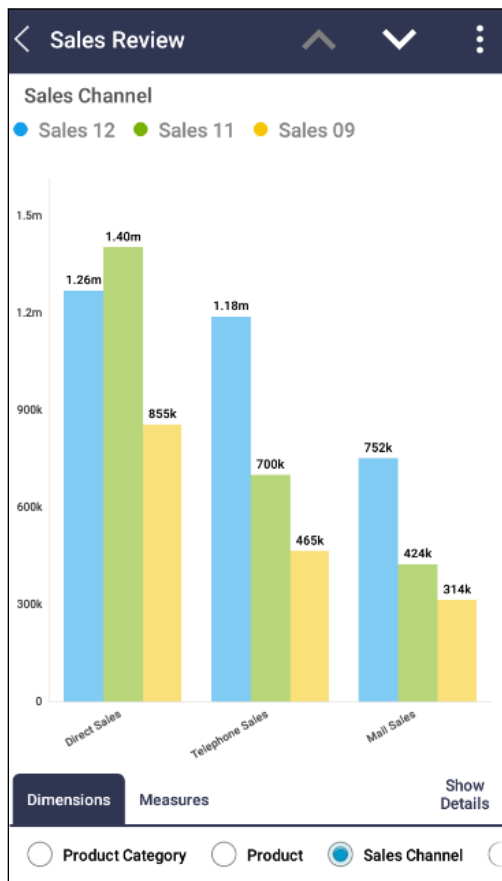


Figure 31: Dashboard on mobile device

15. On Home screen, tap the "Settings" button to connect to a different Intellicus server in case of multiple servers in your network. You can either add a new server or edit an existing one.

The figure shows a "Server" settings dialog box on a mobile device. It has a title bar with "Server" and buttons for "Add" and "Edit". The dialog contains a text field for the server URL, currently set to "http://demo.intellicus.com/demo". Below this is a section titled "Intellicus" with a "Server" label and a text field containing "http://192.168.11.22/intellic". There are also text fields for "Username" (containing "android") and "Password" (containing "\*\*\*\*\*"). At the bottom, there are two buttons: "Connect" and "Device Info".

Figure 32: Server Settings

## 5 Backup and Restore User Data

During Intellicus usage, you create objects like Categories, Reports, Query Objects, Dashboards etc. To protect your data/ metadata and retrieve the same in future running instances, you need backup of these objects. You can take backup of data using the below methods.

### Backup Using Intellicus' iPackager tool

Intellicus' iPackager is a utility to package repository objects, users' preferences and configuration settings from Intellicus repository or local file system in a single file (cab file). This packaged information can then be deployed at any installation site of Intellicus. To know more about iPackager, refer "iPackagerManual.pdf" and "DeployingRepositoryBundle.pdf" under <https://www.intellicus.com/product/documents/manuals/16.0/>

### Backup using Azure Recovery Services vault

You can use Azure' Recovery Services vault to back up (or protect) and restore your data in the Microsoft cloud for future use or in case of any crashing of system or unintended deletion of files by user. To know about the methods by which you can take backup and restore data, refer <https://docs.microsoft.com/en-us/azure/backup/>

**Note:** If you try to launch a new instance from VM and bring up Intellicus, the application will not start. However, you can retrieve required files from this instance and use in another already working instance.