



Overview

February 2019
Version 1.0

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INFOHIGHWAY

Subscriber/Publisher

Subscriber

Publisher



1. A **subscriber** is an agency requiring information from another government institution.
2. A **subscriber** request information based on a set of search criteria.
3. The **subscriber** can obtain the requested information using:
 - I. The InfoHighway Portal
 - II. Web service directly from it's internal application
 - III. Extraction service in .txt format deposited on SFTP
 - IV. InfoSync, transfer of data by specific to the Subscriber



Subscriber request information from **CPD (publisher)**. It will in turn return individual details to Subscriber.

1. A **publisher**, publishers specific set of data to the subscriber.
2. Currently the **publisher** is required to be on GINS to be able to share data.
3. The publisher provides read only data to the subscriber.
4. The data is available at run-time.
5. Only data agreed between the two parties is allowed to be shared.





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InfoHighway Connectivity

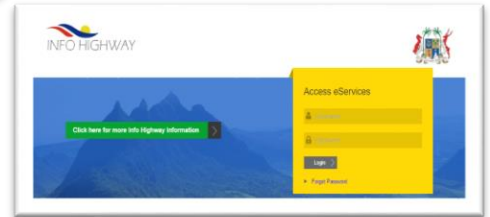
InfoHighway Portal
Web Service (SOAP)

1



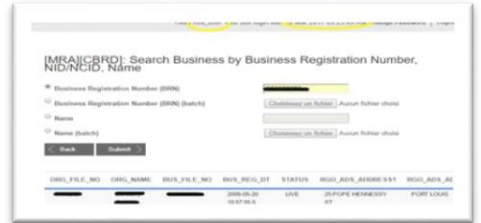
Connect on a Web Browser.

2



Insert Username/Password.

3



Insert search field to access publisher data.

1



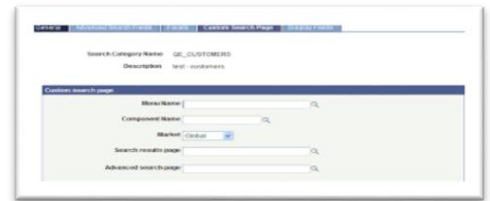
Web service made available by InfoHighway.

2



Web service accessed by local application.

3



Search done directly from subscriber application.



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InfoHighway Connectivity

InfoHighway
Extraction
InfoSync
NEW PRODUCT

1



Extract scheduled based on specific criteria.

2



Data extracted in .txt format at schedule intervals to be shared.

3



Extracted data deposited on Subscriber sFTP folder.

1



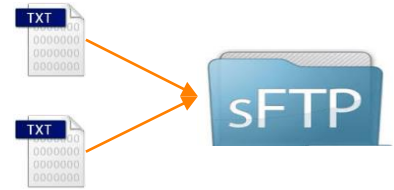
Compare list of records from Publisher & Subscriber, to send only relevant data for the subscriber.

2



Subscriber specific data extracted in .txt format at schedule intervals to be shared.

3

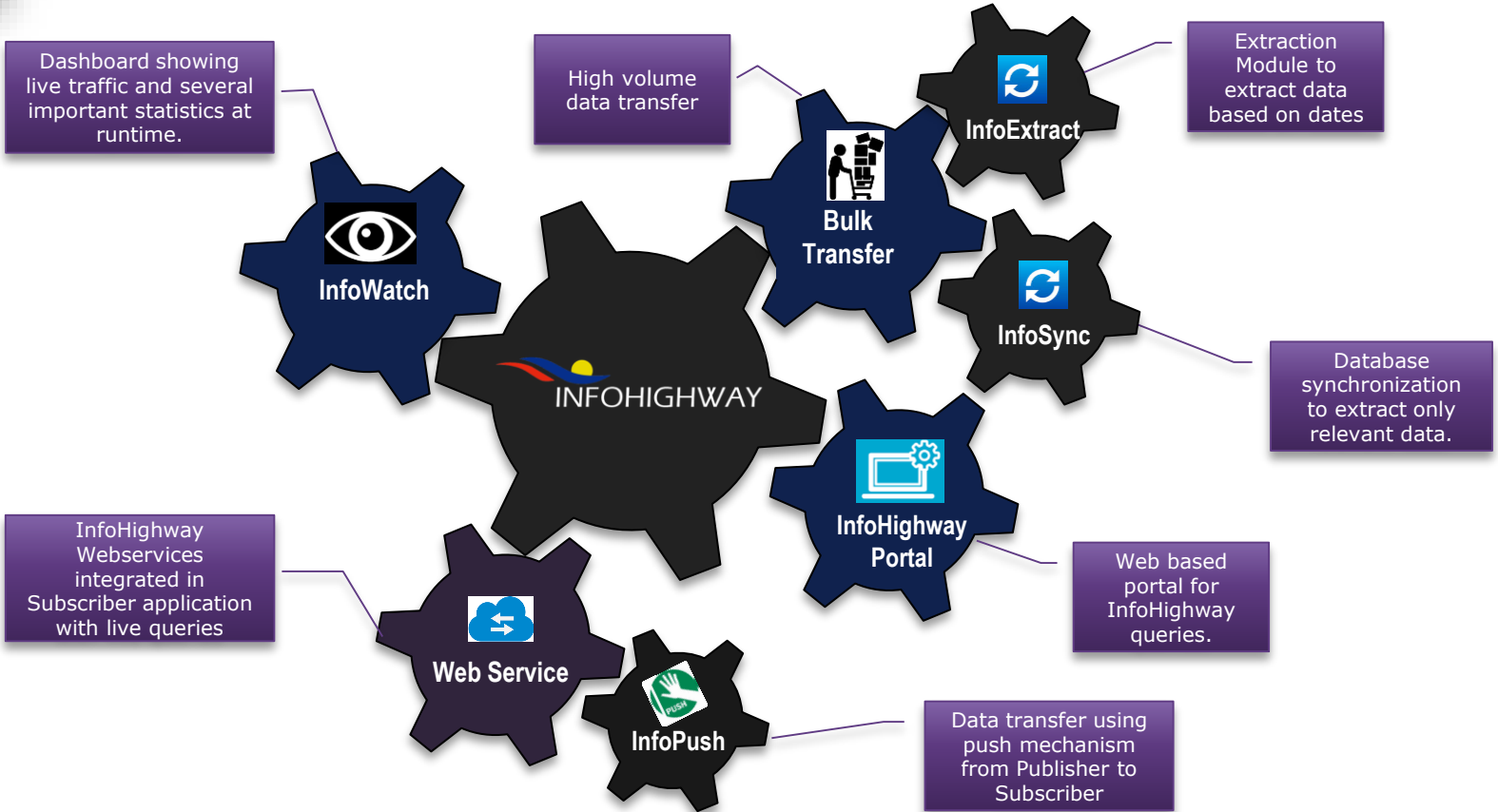


Extracted data deposited on Subscriber sFTP folder.



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InfoHighway Modules





Webservice Integration

Manual Registration



Registration Form

NID:

Surname:

First Name:

Maiden Name:

Gender:

Date of Birth: / /

Address:

Town:



Manual Data Entry

1. Several documents required.
2. Information are inputted manually in the system.
3. Risk of errors very high.
4. The process is time consuming.



InfoHighway Webservice

Registration Form

NID:

Surname:

First Name:

Maiden Name:

Gender:

Date of Birth:

Address:

Town:



Insert NID Only

1. No need to capture citizen details, only NID is needed.
2. Information retrieved at runtime from CPD via InfoHighway.
3. Saves time and risk of errors minimized.



InfoHighway Webservice

Registration Form

NID:

Surname:

First Name:

Maiden Name:

Gender:

Date of Birth:

Address:

Town:



Using Barcode Reader

1. No manual input needed.
2. Citizen NID captured using Bar Code reader
3. Remaining information retrieved at run-time from Civil Status Division.
4. Saves time and risk of errors minimized/eliminated.



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InfoHighway Principle



Publisher



Publisher & Subscriber on GINS



IH Dashboard Monitoring



InfoHighway Monitoring



- IP Address
- Username Password
- SSL certificate



IRSA



Data Protection Office



Board of Investment
Mauritius



- IP Address
- Username Password
- SSL Certificate



Tourism Authority



MRA
MAURITIUS
REVENUE
AUTHORITY



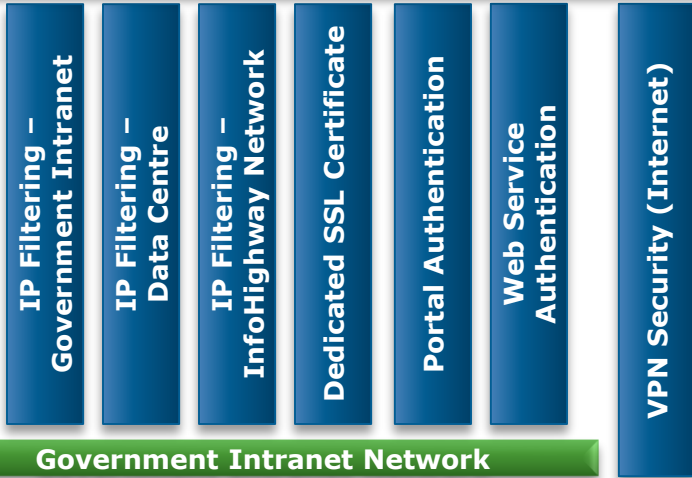
Subscribers

Subscribers



Security Layers

Dashboard Monitoring



- Multi-layers security enforced
- Approval resides at several independent bodies
- Publisher has full control of their database and can stop connection at any point in time
- Whole setup on the GINS network
- None of the IH servers are available on the internet
- External connections done and secured by VPN
- Constant monitoring performed using InfoHighway Dashboard



Certificate Authority



GINS Network



Authentication



Virtual Private Network



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How to join InfoHighway

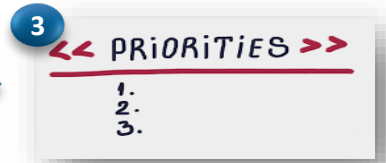
Government Agencies
InfoHighway Team
Subscribers



- Publisher and Subscriber meet up
- Agree on data to be shared
- Sign the Application Form



- MTCI review requests
- Request considered during High Level Management Meeting



- Requests goes to a priority list
- Based on priority requests assigned to InfoHighway Team



- Subscriber required to fill requirements document
- InfoHighway request information from publisher



- Obtain approval for network configuration
- Configure network
- Test connectivity



- Implement E-Services
- Test E-Services
- Create/share credentials with Subscribers



- Configure local machine/servers
- Consume web service in internal application



- Test E-Services/Web Services on local network
- Highlight any bug or issues to InfoHighway Team
- InfoHighway to support as required



- Confirm service working as expected
- Close request



InfoHighway is governed by a number of legislations. The InfoHighway team only acts as a bridge between the Publisher and Subscriber.

- The InfoHighway team has only a read-only access to the Publisher's DB and cannot add, update or delete any information from the Publisher's DB
- Any inconsistencies, in the data need to be reported to the Publisher
- The InfoHighway does not store any data in transit
- The InfoHighway does not transform or modify any data before submitting to Subscriber
- The InfoHighway team can only see the data packet being shared but not the internal information shared
- The InfoHighway team only shares information as per agreement signed between Publishers and Subscribers



1. Computer Misuse and Cybercrime Act
2. Data Protection Act *(Section 28(1)(b))*
3. Electronic Transactions Act
4. Information and Communication Technologies Act
5. Civil Status Act *(Section 17A(2)(a) and (b))*
6. Business Registration Act *(Sections 9B(1A) and 14(1A)(a) and (b))*
7. Immigration Act *(Section 9D(5)(a) and (b))*
8. Non-Citizens (Employment Restriction) Act





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InfoHighway Monitoring

InfoHighway | InfoWatch | G-Cloud | Shawkat Ali Hossainally

Dashboard for February 8, 2019 - February 14, 2019 | Last 7 days | Last Updated: 2019-02-14 09:29:32

Publisher Status

22/22

Running

0/22

Down

Services Status

335/335

Services running

0/335

Services down

Portal Login

#	Subscriber	Count
1	ICAC	91
2	ECO	73
3	IRSA	16

Transmission status

#	Extraction	Client	Service status	F	S	S	M	T	W	T
1	MPF029	MPF	✓	✓	✓	✓	✓	✓	✓	—
2	MPF030	MPF	✓	✓	✓	✓	✓	✓	✓	—
3	MPF031	MPF	✓	✓	✓	✓	✓	✓	✗	—

Live Traffic Overview

Success Login

55

Failed Login

90

Dashboard

43

Web Service

548

Portal

1321

Extraction

6

Queries per Subscriber

#	Subs.	Count	Download
1	MRA	637	25.03 MB
2	ICAC	383	0 byte
3	ECO	198	8.13 MB

Publisher Downtime

#	Publisher	Downtime	Uptime	Duration	Issue desc.
1	DCGP	2019-02-14 04:05	2019-02-14 04:17	12 (mins)	Unable to connect to database.
2	MSS	2019-02-14 02:45	2019-02-14 06:17	3.53 (hrs)	Unable to connect to database.
3	MBRRH	2019-02-13 20:45	2019-02-13 20:57	12 (mins)	Unable to connect to database.

Queries per Service

#	Service	Count	Download
1	ECO001	198	8.13 MB
2	MRA068	165	3.68 MB
3	ICC010	117	0 byte

Subscribers per Publisher

#	Publisher	# of Subs.
1	CPD_New	29
2	CBRD_New	23
3	MSS	6

Connectivity Overview

Monthly Queries distribution

Month	Count
MAR. 2018	13,944
APR. 2018	13,547
MAY. 2018	13,716
JUN. 2018	11,397
JUL. 2018	12,489
AUG. 2018	9,314
SEP. 2018	2,299
OCT. 2018	3,924
NOV. 2018	3,253
DEC. 2018	2,660
JAN. 2019	5,816
FEB. 2019	2,688

Map of Information Publishers

ICC010 portal request by icac_sgobin

InfoWatch Dashboard

- Dashboard monitoring of all E-Services.
- Statistics of the number of E-Services available.
- Any service down is highlighted.
- Live feeds with all request and login monitored.
- Top users and any user connected can be seen.
- Abnormal or high number of queries can be seen and tracked upon.





Hardware Monitoring

- All Infohighway servers are monitored.
- Any unusual traffic is highlighted.
- CPU/Memory usage can be observed live.
- Any issues or any machine unreachable is highlighted as a problem on the dashboard.



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InfoHighway Publishers

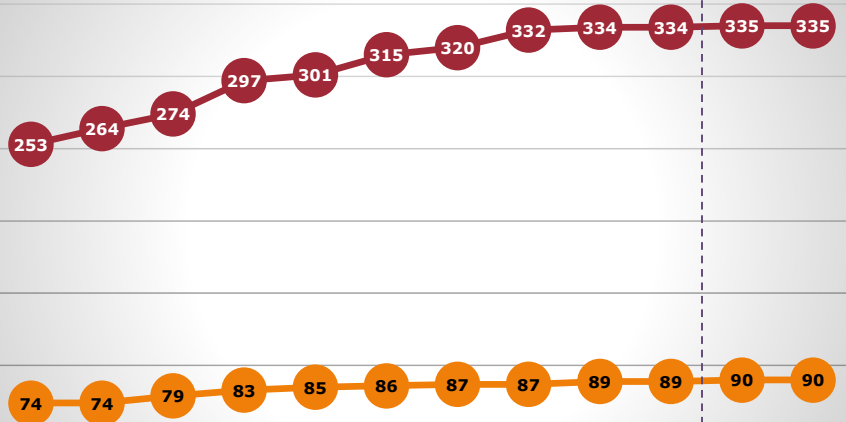




Operational Requests

E-Services per Publisher

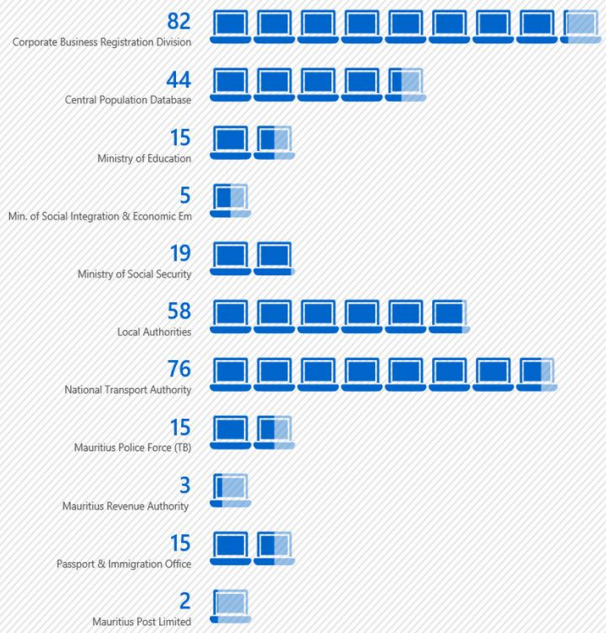
Operational Requests Overview



18-MAR 18-APR 18-MAY 18-JUN 18-JUL 18-AUG 18-SEP 18-OCT 18-NOV 18-DEC 19-JAN 19-FEB

— No. of Connections — No. of E-Services

E-Services per Publishers





-
-
-
-
-
-
-

Q Queries this month*

Last Refresh: 2019/02/14 09:36:07 Next Refresh In: 04 mins 21 secs

12,480

Previous month
30,761

Queries to date*
1,000,672

897

 consecutive days of smooth infoHighway experience in Mauritius*

* Estimate, based on data from 15th January 2017
* Counting as of infoHighway Team takeover as from 31 August 2016

InfoHighway in Mauritius has:

- 87 Connections between publishers and subscribers
- 22 Publishing agencies
- 31 Subscribing agencies

Number of data-sharing e-services that can be used via the InfoHighway

335

Q 5 most popular* queries performed in previous month

- 6,407 queries of Company Details by BRN
- 3,497 queries of SMS details searched by DATE_CREATED
- 3,490 queries of Student master details, searched by DATE_CREATED
- 3,490 queries of Class details, searched by DATE_CREATED
- 3,487 queries of Student_Class details, searched by DATE_CREATED

Since January 2017 savings while using InfoHighway amounts to **1.43** year(s) of working time.

* Assuming that every query saves 15 minutes and 5% of queries submitted via the InfoHighway involve communication between people, then use of e-services helped save 12,508.40 working hours from January 2017 to now.



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Thank You

