IES Cloud User Manual

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What is it?

IES Cloud is a service that allows you to run IES in the cloud (internet visible) or locally at your office. It allows all users to access all of IES functionality without having to install a client of their own. They only need the web address of the service to access it. In addition IES cloud is compatible with a large majority of smartphones, tablets and other web enabled devices. This all means that your system will be available from anywhere if needed.

Quick start.

To get up and running quickly without all the details, please go to '*<u>Standard</u> <u>Installation</u>'. Otherwise, please continue reading for more specifics.*

Architecture.

IES Cloud is architected as a standalone service on Windows which listens on HTTP and HTTPS ports. Clients connect with a web browser using a computer name, IP address or domain name. The service allows users that are connected to login to a pre configured IES service installation by using the address and port of a OpenQM instance running IES.



IES Cloud may be installed on the same server as IES and OpenQM or it may be installed to its own server on the network. If it is installed on a different server, then security will have to be configured to allow remote access to the shared folders (BRIDGE and BRIDGERO). See 'Security Considerations' for more information.

Configuration.

Service Configuration :

The IES Cloud service is configured using the configure application which can be found in the **bin** directory after installation. This configure application is run by default during installation allowing the user to check and modify configuration settings as needed. The application can also be accessed using the start menu, and is located in the Infolab program group.

≡	Î.
	Infolab ^ New
	Alerter Dispatch
	Alerter Dispatch Modem Scanner New
0	Configure Alerter Dispatch New
E1	Configure IES Cloud New
цар	Uninstall Alerter Dispatch
\$\$	Uninstall IES Cloud
Ф	Infolab Enterprise Client 🗸 🗸

The following is a screen capture of the configure interface :

IES Web Service Cor	figuration	— <u> </u>
IP Address:	127.0.0.1	
Server Port:	4,242	
Logon User:	infolabc	
Logon Password:	•••••	
Web Service Port:	80 -	Update Settings

IP Address:

This is the IP address of the IES server and is used to map files from the server so that the cloud service can facilitate between IES server and connected clients. It is also used to connect each user to the OpenQM service. If IES Cloud is installed on the same machine as IES, then this can be left at 127.0.0.1.

Server Port:

This is the port that OpenQM is running on and will be used to connect and login any IES cloud clients.

Logon User:

This is the standard IES logon user for this version and is infolabc and should not be changed.

Logon Password:

This is the password for the login user.

Web Service Port:

This is the port that the service listens on and will be have to entered with the web address if it is something other than 80 (HTTP)

When all the settings have been reviewed, *Update Settings* can be clicked to save.

IES Web Service Configuration	×
i Settings Updated.	
ОК	

The above dialog will be displayed to confirm that settings has been saved.

Logging Configuration :

The IES Cloud service logs appropriate messages to a rolling log folder at /infolab/ies-web/log.

The logging functionality can be configured using the file log4j2.xml which is at /Infolab/ies-web/conf:

📕 🖓 📙 🖛	conf							×
File Home	Share	View						~ 🕜
Pin to Quick Copy access	Paste	6 Move to -	X Delete ▼ ■ Rename	New folder	∎ •]•	Properties	Select all	ne ection
Clipboa	rd	Orgai	nize	New		Open	Select	
$\leftarrow \rightarrow \ \bullet \ \uparrow$	🔜 « Info	lab > ies-web >	conf	~	ē	Search conf		Q
source	^	Name	Date mod	ified	Тур	e	Size	
\land OneDrive		🥁 log4j2.xml	4/14/2017	12:13 PM	XM	L File	2 KB	
💻 This PC 🛄 Desktop 🚊 Document	ts	■ settings.csv 2 xhtml2fo.xsl	10/10/201 5/28/2017	7 6:56 AM 4:56 PM	Op XSL	enOffice.org 1 Stylesheet	1 KB 62 KB	
Download Music 3 items 1 item	s selected 1.	33 KB						

A Reference for the XML configuration in this file can be found at : Configuring Log4J 2

Servers Configuration :

The list of servers display to clients connecting to the IES Cloud service (at the login screen) can be configured by editing the sessions.xml file at /infolab/ies-web/base/WEB-INF/

	🗌 = V	VEB-INF						<u>6)</u>	- 0	×
File	Home	Share	2	View						~ 🕐
Pin to Qui access	ick Copy	Daste	2	🙀 Move to 🕶	★ Delete ▼ ■ Rename	<mark>Ⅰ</mark> New folder	•	Properties	Select all	ne ection
	Clipboard	d		Orga	nize	New		Open	Select	
$\leftarrow \rightarrow$	~ 个	< ba	ase	ROOT > WEE	3-INF	~ 0	5	Search WEB-INF		Q
E	esktop	^	1	Name	^			Date modified	Туре	
1 E	ocuments	1		classes				10/10/2017 6:51 AM	File folder	r i
۵ 🦊 ۲	ownloads			🛛 sessions.xml				10/10/2017 6:56 AM	XML File	
J N	Ausic									
F	lictures									
N	ideos									
L (OS (C:)									
- r	nobile1 (E:)) ~	<							>
2 items	1 item s	elected	767	bytes						

The file can be edited with a text editor, and the commented out server can be uncommented and edited as needed (lines 16-32) :



Upgrade.

The following steps are needed to upgrade IES Cloud to a new version :

- 1) Backup settings at conf/ and certificate at cert/ies.keystore
- 2) Ensure all users have logged out.
- 3) Run the new installer.
- 4) Restore backed up settings and certificate..

The new installer will stop the service if it is currently running, uninstall the previous version and install the new version thereafter. It will also start the service after installation.

Uninstall.

To Uninstall IES Cloud, use the "Uninstall IES Cloud" option under the 'Infolab' program group and follow the prompts.



IES Cloud can also be uninstalled by executing the "uninstall.exe" program in the /infolab/ies-web/ folder

to Quick Copy Paste	Move to V Cele	rte • I To ame New Pro folder	perties	ect all ect none ert selection
Clipboard	Organize	New	Open	Select
• -> • 🛧 📙 « OS	(C:) \Rightarrow Infolab \Rightarrow ies-web	√ Č	Search ies-web	
package ^	Name	Date modified	Туре	Size
png	base	9/28/2017 1:32 PM	File folder	
ConeDrive	bin	9/28/2017 1:32 PM	File folder	
- onebrive	cert	9/28/2017 1:32 PM	File folder	
💻 This PC	onf	9/28/2017 1:32 PM	File folder	
E Desktop	📙 doc	9/28/2017 1:32 PM	File folder	
Documents	📑 images	9/28/2017 1:32 PM	File folder	
Downloads	🔜 lib	9/28/2017 1:32 PM	File folder	
h Music	log	9/28/2017 1:34 PM	File folder	
Distures	template	9/28/2017 1:32 PM	File folder	
	configure.bat	4/15/2017 11:57 AM	Windows Batch File	1 K
Videos	💿 ies-web.bat	4/14/2017 3:54 PM	Windows Batch File	1 K
🛀 OS (C:)	imake-self-cert.bat	4/14/2017 3:54 PM	Windows Batch File	1 K
🕳 mobile1 (E:)	port-rule.bat	6/6/2017 8:47 AM	Windows Batch File	1 K
3TB (H:)	🚱 Uninstall.exe	9/28/2017 1:32 PM	Application	124 K

On uninstallation you will see the following prompt :



On clicking Next, the following dialog is displayed :

🚳 IES Cloud Uninsta	ill		1 <u></u>		×
Uninstall IES Clou	ıd			F	7
Remove IES Cloud	from your computer.			E	8
IES Cloud will be un uninstallation.	installed from the followin	ng folder. Click Uninst	all to start the		
Uninstalling from:	c:\infolab\ies-web\				
Convright © Tofolah P	wild 1994-2017				
copyright @ 1110ldb f	() cuij 1991 colit -	< <u>B</u> ack	Uninstall	Can	cel

The folder is ok as is, click **Uninstall**.

The uninstaller will proceed to stop the service and remove all the IES Cloud installation files :

IES Cloud Uninstall	- <u></u>		×
Uninstalling		E	3
Please wait while IES Cloud is being uninstalled.		E	
Delete file: c:\infolab\ies-web\Uninstall.exe			
Show <u>d</u> etails			
Copyright © Infolab Pty Ltd, 1994-2017			
< <u>B</u> ac	k <u>N</u> ext >	Can	cel

Once uninstallation has completed, you will see the following dialog :

IES Cloud Uninstall	- 🗆 🗙
M	Completing IES Cloud Uninstall
E	IES Cloud has been uninstalled from your computer. Click Finish to close Setup.
	< <u>B</u> ack <u>Finish</u> Cancel

Click **Finish** to exit the uninstaller.

Standard Installation.

In order to install the latest version of IES Cloud, you will need to download it from the website. After download you can run the installer, which will show the following dialog :



If it shows the *uninstall dialog*, then it means that you already have a copy installed and that it will be uninstalled first. Follow the uninstall instructions above should this be the case.

If you do not have Java 1.8 or later installed, before executing this step, the the installer will notify you of this and direct you to the Oracle site to install Java first. It is important to have the correct version of Java for your machine, 32bit or 64bit. IES Cloud only looks for a Java installation of the same type as your main processor, so make sure to install the correct one. See '*Java Installation*' for more information.

Click Next to proceed

			×
Choose Install Location		F	7
Choose the folder in which to install IES Cloud.		E	0
Setup will install IES Cloud in the following folder. To install in a and select another folder. Click Next to continue.	different fold	er, dick Brov	vse
Destination Folder			
Destination Folder		Browse	
Destination Folder c:\infolab\ies-web\		Browse	
Destination Folder c:\infolab\jes-web\ Space required: 41.8MB		3rowse	
Destination Folder c:\infolab\ies-web\ Space required: 41.8MB Space available: 106.0GB		Browse	
Destination Folder C:\infolab\ies=web\ Space required: 41.8MB Space available: 106.0GB Copyright © Infolab Pty Ltd, 1994-2017		Browse	
Destination Folder		Browse	

Select the install location, or leave the default as is and click **Next**.

IES Cloud Setup	- <u></u> -		×
Choose Start Menu Folder		T	3
Choose a Start Menu folder for the IES Cloud shortcuts.		E	•
Select the Start Menu folder in which you would like to create the can also enter a name to create a new folder.	program's sho	rtcuts. Yo	u
7-Zip			^
Accessibility			
Accessories			
Administrative Loois			
Android Studio			
AsciidocFX			
Battlefield 4			
Bluetooth			
Cell C Chrome Apps			~
Do not create shortcuts			
pyright © Infolab Pty Ltd, 1994-2017 —			
< Back	Install	Can	el
< Dark	<u>a</u> no com	Cari	

Please choose the program group to create for IES Cloud, or leave the default alone and click **Install**.

IES Cloud setup will proceed to copy some files :

IES Cloud Setup		- <u></u> -	
Installing			P
Please wait while IES Cloud is being installed.			
Extract: az_animate.js			
Show <u>d</u> etails			
Copyright © Infolab Pty Ltd, 1994-2017			
	< <u>B</u> ack	Next >	Cancel

Next, IES Cloud Setup will create the IES Cloud service entry and run the configure app to allow you to enter basic parameters for the installed service :

Please see the '<u>Configuration</u>' section of this document for details.

After configuration, The IES Cloud service is automatically started and firewall entries created for the server and port as entered in configuration.



Click Finish to exit the installer.

Managing the Service.

The IES Cloud service runs as a Windows service and can be accessed by pressing **Windows+R** keys to open the Run dialog, typing 'services.msc' and pressing Enter.

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🧟 Services (Local)	Name Myper-V Remote De Hyper-V Time Synch Hyper-V Volume Sha Kales Alerter	A sktop Virtualization Sen nronization Service adow Copy Requestor	vice	Description Provides a platform for communication between the Synchronizes the system time of this virtual machine Coordinates the communications that are required to Infolab Enterprise System alerter dispatch service.		
	LES Cloud LES Cloud LE and AuthIP If Infrared monitor Infrared monitor Intel(R) Capabilit Intel(R) Capabilit Intel(R) Dynamic Intel(R) Manager Intel(R) Manager	Start Stop Pause Resume Restart All Tasks > Refresh	iterfa erfa in Lo	Infolab Enterprise System cloud service. The IKEEXT service hosts the Internet Key Exchange (I# Detects other Infrared devices that are in range and la Provides support for the Running Object Table for Insi Version: 1.27.798.1 Version: 1.27.798.1 Intel(R) Dynamic Application Loader Host Interface Se Intel(R) Management and Security Application Local P Provides storage event notification and manages com		
	Intel(R) Wireless Interactive Servic	Properties	ıge	Manage Intel(R) Wireless Bluetooth(R) 4.0 radio state Enables user notification of user input for interactive s		
	ioloEnergyBooster		1	Provides tunnel connectivity using IPv6 transition tech		

You can scroll down to the entry for IES Cloud to manage the service.

The service manager can be used to start and stop the IES Cloud service, but always make sure that all users using the IES Cloud service (web users) are logged off before stopping it, otherwise they will have their sessions interrupted.

The service manager also shows the status of the service in the top bar and the service properties can be used to set settings such as auto-start and the user credentials used for the service.

Log Files

Log files for the service is kept at /infolab/ies-web/log

The default logging strategy is to keep files daily files which rollover at 30mb, but this can be modified. See '*Logging Configuration*' in the '*Configuration*' section.

Accessing the service.

The IES Cloud service can be accessed by a user using a web browser by entering the URL to the IES service.

- 1) **http://localhost/ies** for accessing the service from the machine it is installed on.
- 2) http://[ip.address]/ies for accessing it from another machine on the same network or through a VPN.
- 3) **http://[domain-name]/ies** for accessing it from anywhere on the internet if it is running on a registered domain on the internet.

For web users connected using the HTTP protocol, the address bar will look like this :



By default HTTPS support is enabled with a self-signed certificate so the user will see an SSL exception when accessing the service using the HTTPS protocol. See '<u>Security Considerations</u>' for details on setting up complete HTTPS support.

For web users connected using the HTTPS protocol, with the standard setup, the address bar will look like this :



This is the login screen that greets you on accessing the service from a browser :



Looking closer at the Login dialog :

ease Login		
Enter your user coo	de and password to lo	ogin.
Server	11 1150	
Server.	iesCloud	~
User Code:	dm	
Password:		Login
Use m	obile display mode:	

The server dropdown contains the default entry which will log the user on to the configured IES server. Additional servers can be configured to appear in the list. Please see '<u>Servers Configuration</u>' in the '<u>Configuration</u>' section for more information.

The user can enter their username and password and click **Login** to log into IES. The checkbox for mobile display mode can be clicked to enable a more mobile / touch friendly interface on mobile devices.

If login is successful, a page similar to the following will be displayed :

	IES Cloud (Client 9.4	× +											- 0	×
(+)	🛈 🐔 http	os://localhost	/ies	C 🛞	Q. Search	1	☆ 🖻 🛡	÷	î	1	0 🍾		- 5	X	
S IE	S Cloud Cli	ent 9.4 @ INF	OLAB, All Rig	hts Reserved	1.										_B×
i	<u>) Q (</u>	<u>) () «</u>	$\gg \times 1$	1 43 6											
	Select	Applicat	ion @ G	ummy H	loops Inc	:									
	A Ctris	Access	Alerter	Assets	Budget	CashBook	CMMS	Conc	Perete	Consolidat	Conta	act 🕷	S Contain	Creditor	
	-		*						3		-			2/2	
	CRM	Debtor	Distrib	Estates	Exchange	Export	Harvesting	Insura	ance	Jobs	Jour	nal	Ledger	Loans	
	Manufac	Merchant	корона <u>Міі</u>	Mill Bids		Nursery	Objects	01	h ffice	Payroll	Person	nel Pr	vsicals	Property	
	D	100	-		-	0	6			5	2	e	5)		
	Purchase	RepWhse	Retail	Sapi	Savings	Serv Jobs	Set Up	Ship	vard	Stock	Sys Ad	im	Tasks	UserServ	
() I	ГUE 10 ОСТ	2017 3:07 P	РМ 🤶 ДАТА	Manager [(В Сомму Ноог	PS INC - IES	BUSINESS]	SELEC	т Аррі	ICATION	DM_APP	SELECT		•	Log Off

Users should always log off correctly before closing the browser window or navigating to a new URL in the same tab.

IES Cloud will warn the user when closing the browser or navigating away using a dialog similar to the following :

Do you want to reload this site?		
Changes you made may not be saved.		
	Reload	Don't Reload

If the user presses **Reload** then the page will be reloaded with the connection lost until logged off manually by the system administrator



If the user presses **Leave** here then the connection will be lost until logged off manually by the system administrator.

These dialogs will look different on browsers other than Chrome (which these screenshots was taken from).

Java installation :

IES Cloud requires Java 8 or later to be installed for the correct processor type. This means that on a 64bit machine, the 64bit JRE or JDK must be installed.

Please see <u>https://www.java.com/en/download/help/windows_manual_download.xml</u> for instruction on installing Java on Windows.

Security Considerations.

General :

Communication between connected clients and the IES Cloud service uses standard HTTP between the client browser and the service. This makes it suitable only for use within a trusted network. For better security, a VPN can be installed for internal and external networks which will encrypt communications between clients and the server. For secure exposure on the world wide web as a true cloud service, HTTPS will have to be enabled.

HTTPS setup :

In order to enable full HTTPS functionality using encryption and authentication, the system administrator will have to follow the steps below :

- 1) Register a domain, for example : <u>www.my-new-domain.com</u>
- 2) Point domain name server to internet IP of server machine that will run IES cloud.
- 3) Get a HTTPS certificate for the site www.my-new-site.com.
- You will need a public key and will have to send a Certificate Signing Request to a certificate provider of choice.
- 4) Convert the certificate to a Jetty keystore. (see: loading-keys-and-certificates)
- 5) The keystore password must be "iespass"
- 6) The keystore file should be copied to infolab/ies-web/cert/ies.keystore

Once the above setup has been done, IES can be accessed using the HTTPS protocol.

This is what the address bar will look like for a user connected through HTTPS (using Infolab's certificate as an example):



Existing Keystore

The initial certificate after a clean install is a self signed certificate and can serve HTTPS with encryption, but without authentication. The browser will present a warning page, which if bypassed runs in partial HTTPS with the address bar looking like this :



Shared Folders :

The IES Cloud service needs access the shared folders BRIDGE and BRIDGERO on the IES Server. If the IES Cloud service is installed on a remote machine, then the user that the service runs under must have the right security credentials to access the IES Server machine with shared folders. The user that the IES Cloud service logs on as can be configured using the Service Manager of Windows, Please see the 'Managing the Service' section.

Troubleshooting.

Symptom	Solution
Cannot access the IES server using the correct URL. Page takes a while to load before displaying "Unable to Connect" or "Cannot load page"	Make sure that the IES Cloud service is running. Look at the ' <i>Managing the Service</i> ' section for more details.
404 Page not found	While the service is starting up it will show this, just reload the page a second later and it should be fine.
Connection Problem The server is not currently available. OK	This means that the IES Cloud service could not connect to the IES Server and most probably means that the OpenQM service is stopped.
Login Problem The login script failed due to reason: No available seat, please try	This means that the maximum number of users on the OpenQM server has been reached. This could be due to multiple logins from different browsers. Or from users not logging off before closing the browser or reloading the page after login.
Request generated an error: // server time = 26015 mill navix.init() Line:1 - Timed out waiting milliseconds).navix.service	This indicates a hung connection between IES Cloud and IES server. Restarting the IES Cloud service will fix this.

Service won't start. Log file contains : "{0.0.0.0:443}: java.net.BindException:	Some other application is binding the SSL port 443 so that IES Cloud cannot listen on it. You can try any of the following:
Address already in use: bind"	 Remove the file cert/ies.keystore so that IES Cloud does not try to listen on port 443. Find out which application is binding port 443 by using netstat -ano command to find the processid and tasklist /fi "pid eq processid" to look up the associated application, Stop the app that is binding the port.