SETTING UP BIITOPS CHANGES

FOR WINDOWS ADMIN CENTER

CHANGES
FOR WINDOWS
ADMIN CENTER

Version 2.0

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c) Deploy the Data Collection Agent to the desired servers

d) Set the desired data collection frequency

e) Request and install a license

1: SOLUTION ARCHITECTURE AND UNDERSTANDING

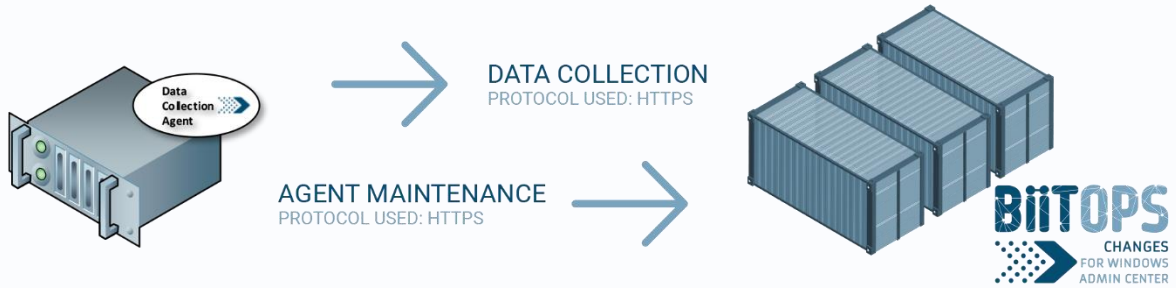
The BiitOps Changes for Windows Admin Center Solution consists of two parts:

1. The BiitOps Changes Solution Backend
2. The BiitOps Changes Extensions for Windows Admin Center

ARCHITECTURE

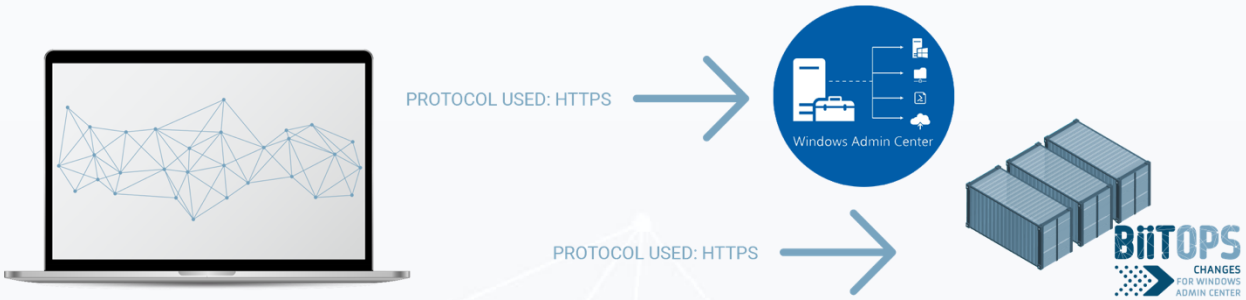
DATA COLLECTION

Data collection for the BiitOps Changes Solution is done using a fully managed Data Collection Agent which must be deployed to all servers. Once deployed, continuous data collection and agent maintenance tasks are fully automated.



ADMIN DATA ACCESS

To access the BiitOps changes data, logon to your Windows Admin Center and launch the BiitOps Changes Extension. The Extension will establish a separate connection to the BiitOps Changes Backend Solution.



THE BIITOPS CHANGES SOLUTION BACKEND

The BiitOps Changes Solution Backend is delivered and maintained as a set of Docker Containers. Each container runs a separate workload, and communication between the containers are automatically configured using the BiitOps Changes Configuration tool.

PREREQUISITES

In order to successfully configure the BiitOps Changes Solution Backend. The following prerequisites should be prepared.

Resource	Details
1 x Windows Server	Operating System: *Windows Server 2016 or 2019* *CPU:* Minimum: 2 vCPUs Recommended: 4 vCPUs *Memory:* Minimum: 4 GB Recommended: 8 GB *Disk:* System Disk Minimum: 100 GB Recommend: 200 GB Data Disk: Estimated: 3-400 MB per deployed agent Note: *No DNS server service can be present on the server.* *No other service on the server can listen on TCP 443*
1 x DNS name (FQDN)	FQDN (like biitops.contoso.com) must be registered with DNS service(s). - All monitored servers must be able to resolve this FQDN to the respective IP address. - All admin workstations used for accessing Windows Admin Center must be able to resolve this FQDN to the respective IP address.

Resource	Details
1 x SSL Certificate	A Trusted SSL Certificate for the selected FQDN. This certificate can be issued from either - Any public trusted Certificate Authority - An internal Certificate Authority (Must be trusted by all servers as well as admin workstations

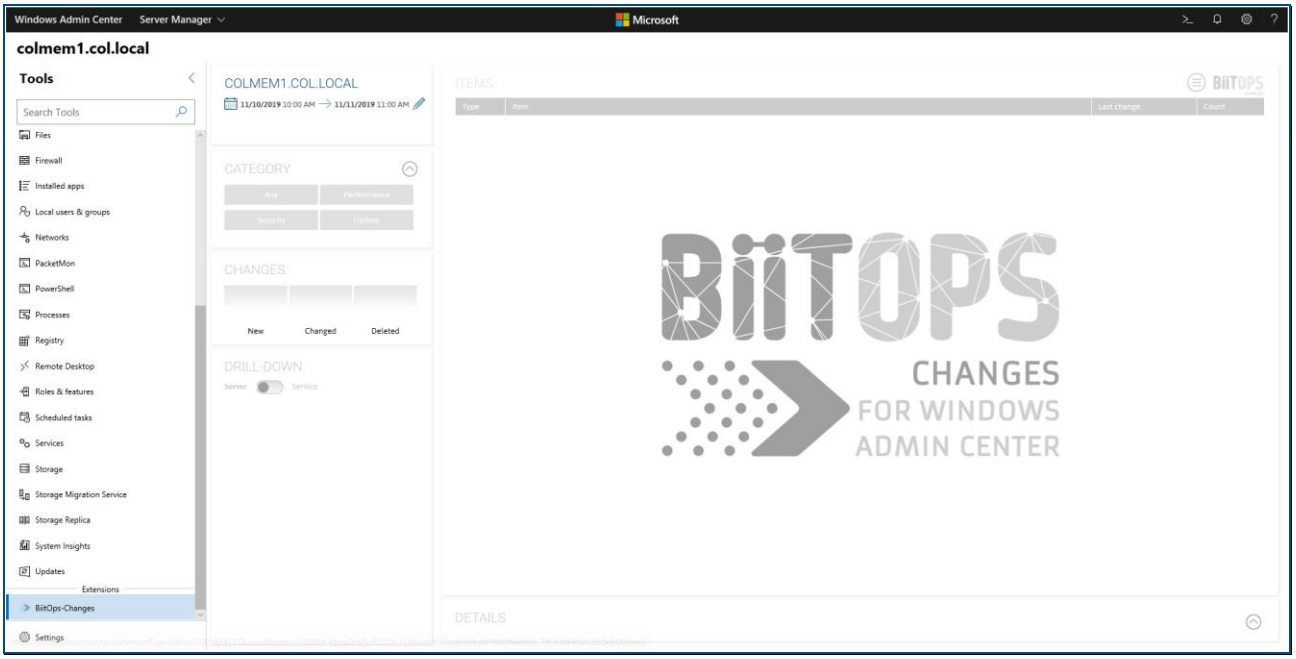
FIREWALL CONSIDERATIONS

To successfully enable solution communication, you must configure any firewall to permit the following traffic

Usage	Firewall Opening	Details
Server configuration data collection	From: Any servers running data collection agent To: BiitOps Changes Backend Solution Protocol: HTTPS	All communication between Data Collection Agents and the BiitOps Changes Backend Solution is initiated from the agent only, and always over a secure SSL connection. TCP port 443 must be allowed through the firewall.
Admin Workstation access to changes data	From: Any Admin Workstation used to connect to Windows Admin Center To: BiitOps Changes Backend Solution Protocol: HTTPS	To connect to BiitOps Change data through Windows Admin Center Extension, a connection is established over secure SSL directly from the admin workstation to the BiitOps Changes Backend Solution. TCP port 443 must be allowed through the firewall.
BiitOps Solution updating	From: BiitOps Changes Backend Solution To: Docker Hub Protocol: HTTPS	To update the BiitOps Changes Backend Solution itself, it should be possible to connect to Docker Hub over secure SSL. TCP port 443 must be allowed through the firewall.

THE WINDOWS ADMIN CENTER EXTENSION

The BiitOps Changes Extension for Windows Admin Center is delivered through the Microsoft Windows Admin Center feed and must be installed once and configured per Windows Admin Center User.



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2: SETTING UP BIITOPS CHANGES SOLUTION

The setup process involves the following steps

a) Deploy the BiitOps Changes Backend Solution

b) Install the BiitOps Changes Extension in Windows Admin Center

c) Deploy the Data Collection Agent to the desired servers

d) Choose the desired data collection frequency

e) Request and install a license through the BiitOps Changes Extension (for full version only - not needed for free trial)

Once complete, you will be ready to use the solution.

A) DEPLOY THE BIITOPS CHANGES BACKEND SOLUTION

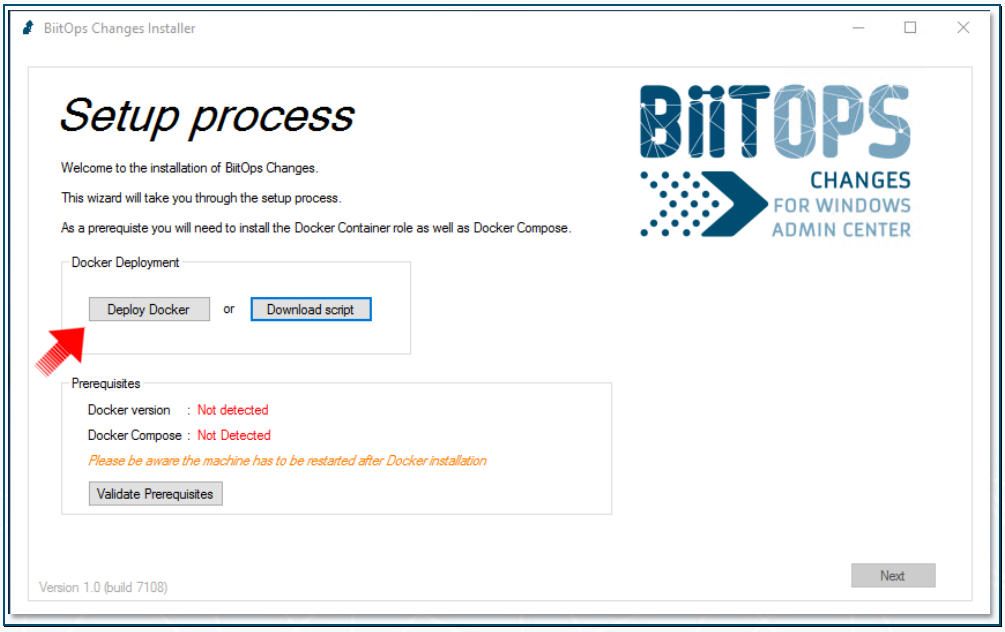
Copy the BiitOps Changes Configuration Utility to your server.

If needed the BiitOps Changes Configuration Utility is available here: https://download-changes.biitops.com/

Copy the SSL Certificate to the server, but do NOT import it into the certificate store.

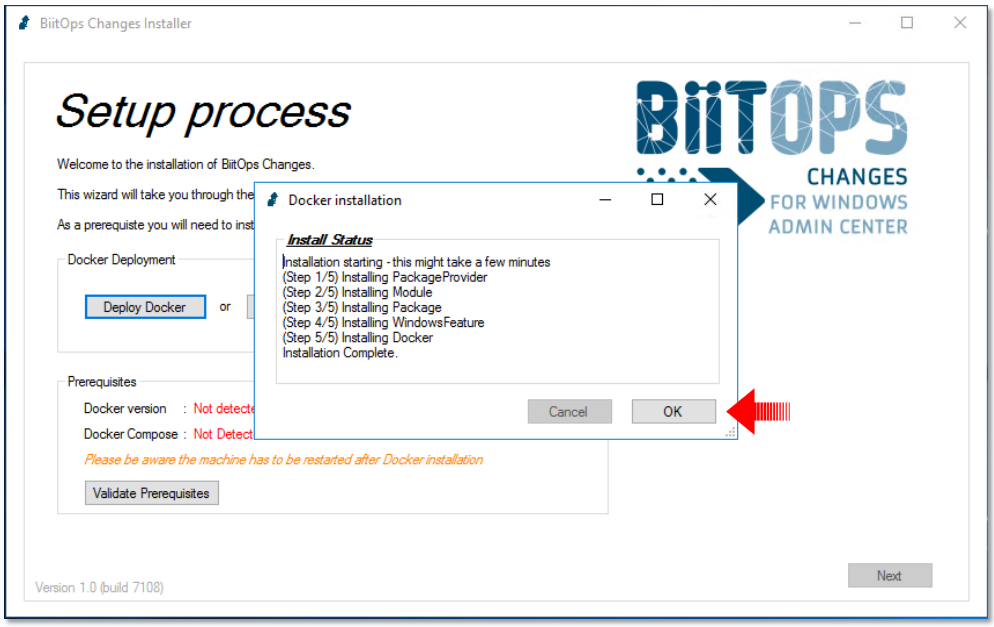
Run the ConfigureBiitOpsChanges.exe and verify that Docker is not already installed.

Click “Deploy Docker”.

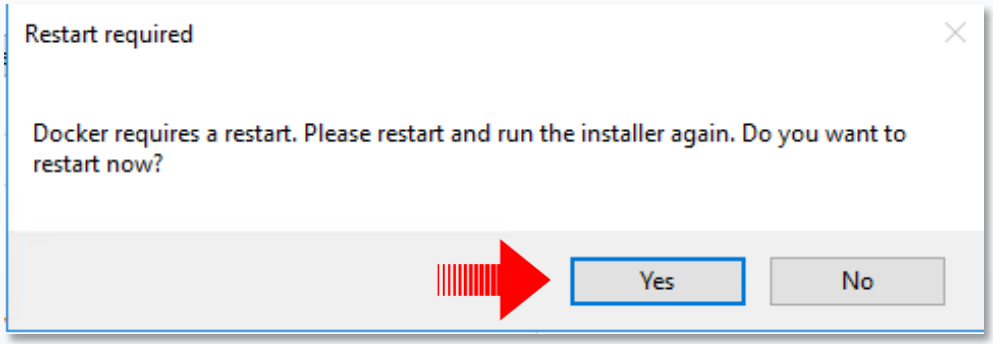


The installation consists of five steps, after which a reboot is required.

Once installation is complete, click “Ok”.



Click Ok and click YES to reboot the server

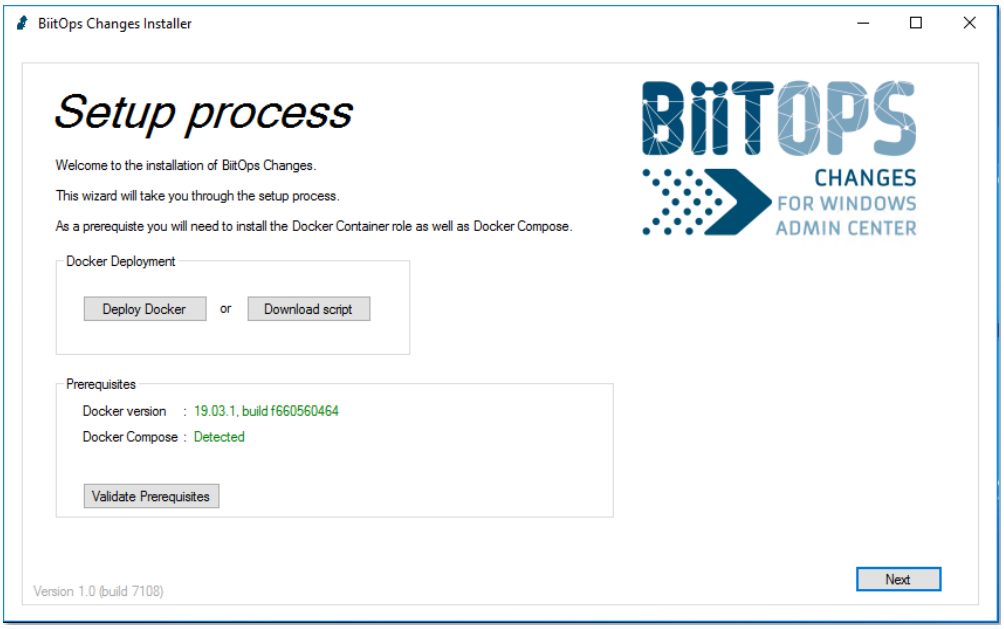


Once the server is back online, Docker will have been installed and ready.

CONFIGURING THE BIITOPS CHANGES BACKEND SOLUTION

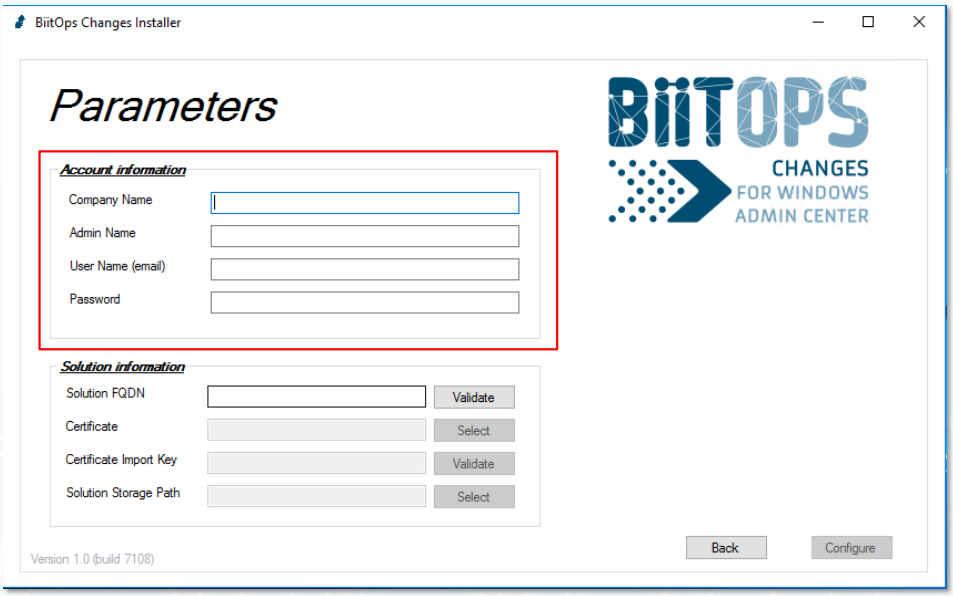
Rerun the ConfigureBiitOpsChanges.exe and verify that docker is now installed.

Click “Next”.



Enter Company name, Admin name, Username and Password.

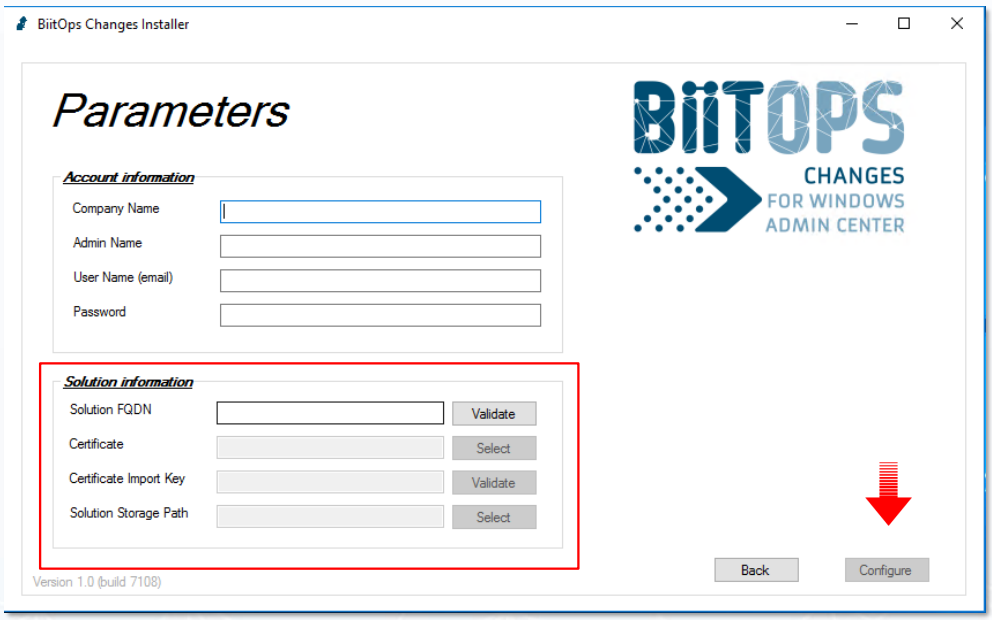
Note: These credentials will be used later when you access the solution through Windows Admin Center.



Enter the Solution information below.

Please note that each step needs to be validated.

Solution Information	Details
Solution FQDN	This is the Fully Qualified Domain name you have already registered in DNS
Certificate	Click select and select the desired ssl certificate
Certificate Import Key	Provide the certificate import password and click validate
Solution Storage Path	Create a folder for the BiitOps data on the data drive of the server and select this folder. BiitOps Solution data will be store here, outside the containers, allowing for container update with no data loss.



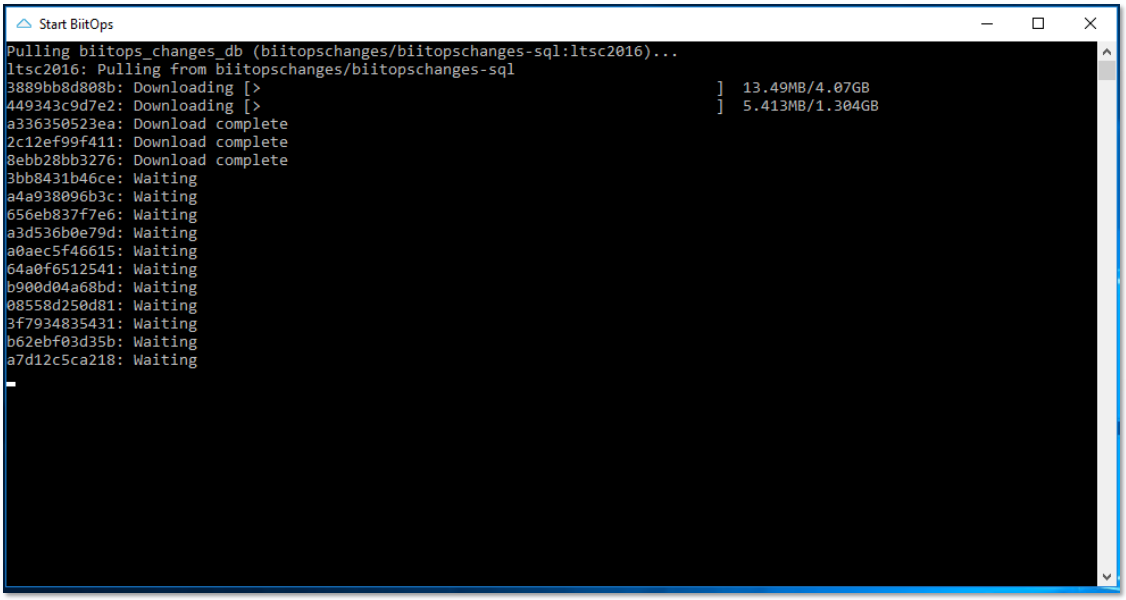
Click “Configure”.

The solution is now configured and ready to pull the containers from Docker Hub.
If you need to reconfigure the BiitOps Changes Backend solution to either replace the SSL certificate or change the password, simple rerun the BiitOps Configuration Utility. Restart the BiitOps Changes Backend solution to allow the changes to take effect.

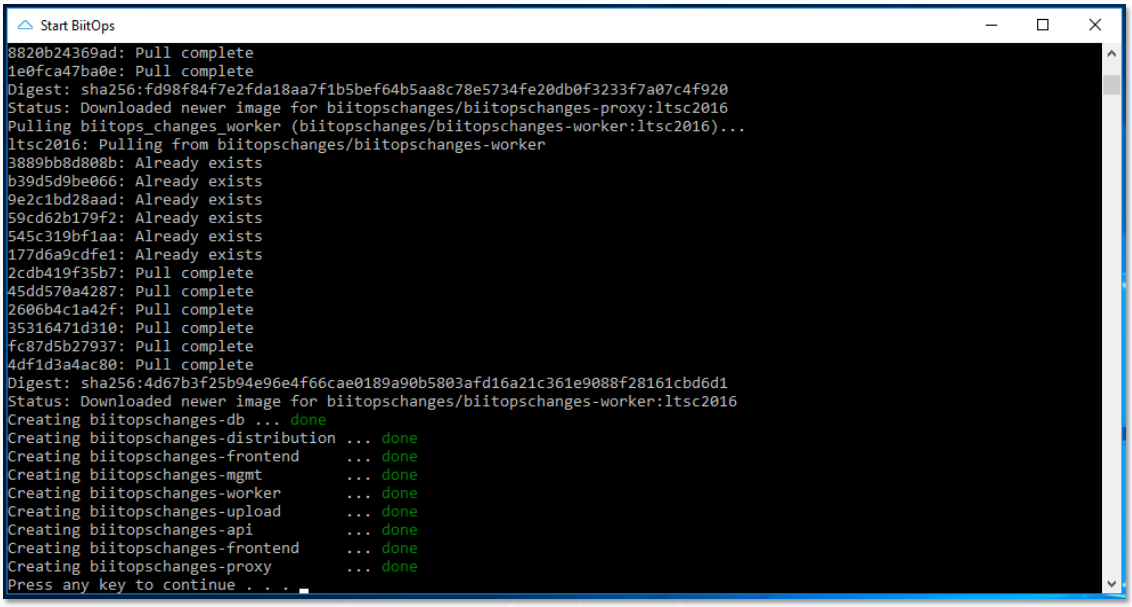
The container download process typically takes somewhere between 30-120 minutes, depending on the available internet bandwidth.
BiitOps Changes Configuration Utility creates four shortcuts to manage the Docker environment, both on the Desktop and in the Start menu.

Shortcuts	Details
Start BiitOps	Starts the container download process if not already downloaded, then starts the solution.
Stop BiitOps	Shuts down all containers
Update BiitOps	Downloads any updates, shuts down all containers, then restarts the containers. *Note: This shortcut will go thru the shutdown and restart process, even if there is no updates available.*
Start Docker Stats	Start the Docker Stats, which provides an overview of containers currently running and their performance footprint.

Run the Start BiitOps shortcut to begin the process of downloading the containers.

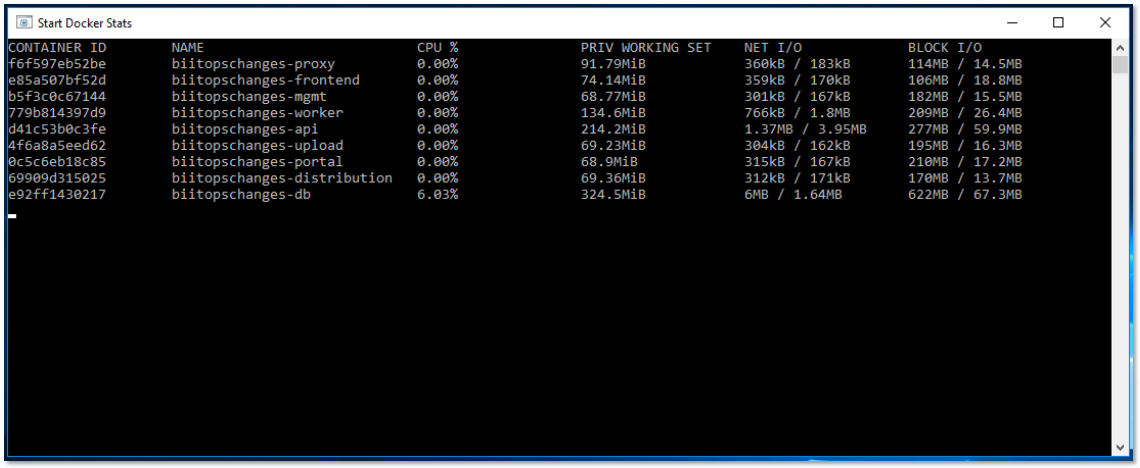


Once done, your screen will look like the image below.



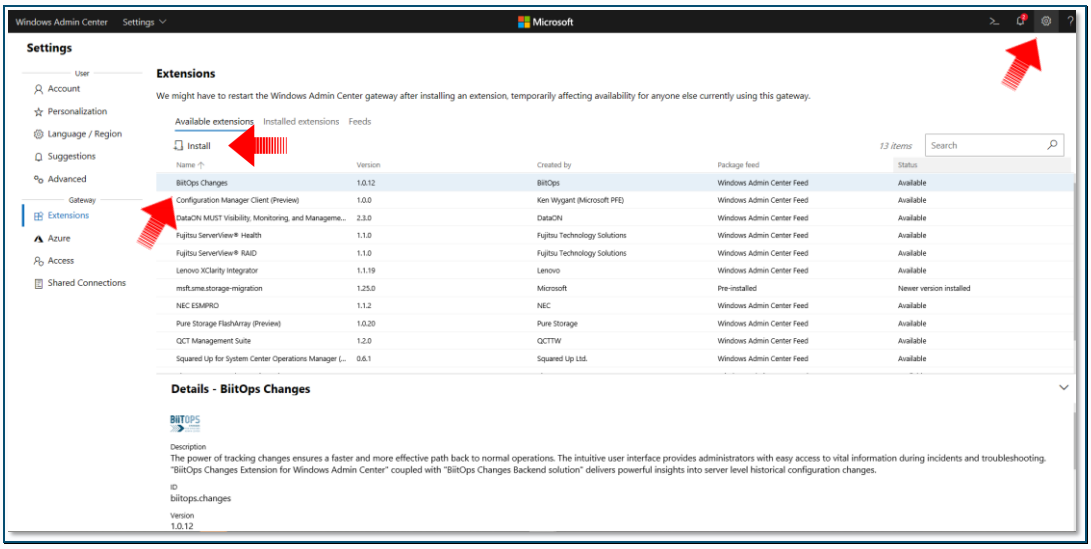
Press any key to close the window.

Optionally, start the Docker Stats to see the container performance footprint.



B) INSTALLING THE BIITOPS CHANGES EXTENSION INTO WINDOWS ADMIN CENTER

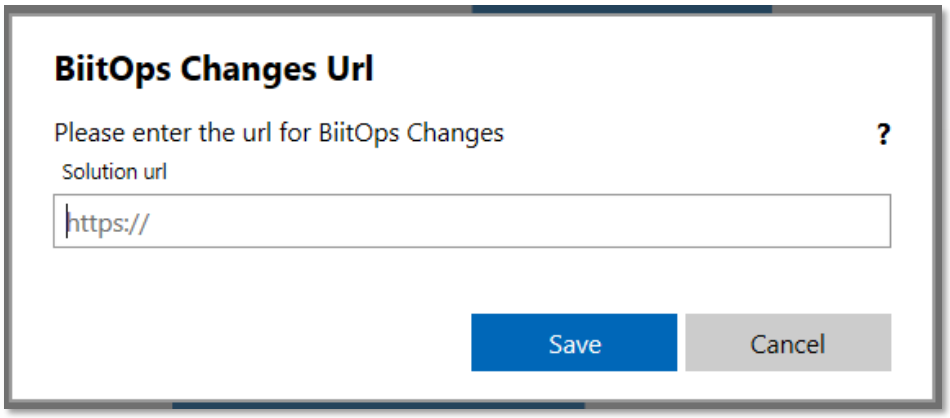
Click “Settings” within Windows Admin Center, click “Extensions”, select the BiitOps Changes Extension and finally click “Install”.



When the extension is installed:

1) Click the Windows Admin Center logo in the top left corner
2) Choose any server
3) In the left-hand menu, scroll to bottom and click “BiitOps Changes”
4) In the Popup dialog box, enter the URL of the BiitOps Changes Backend Solution, including https:// (Example: https://mybiitops.domain.com)

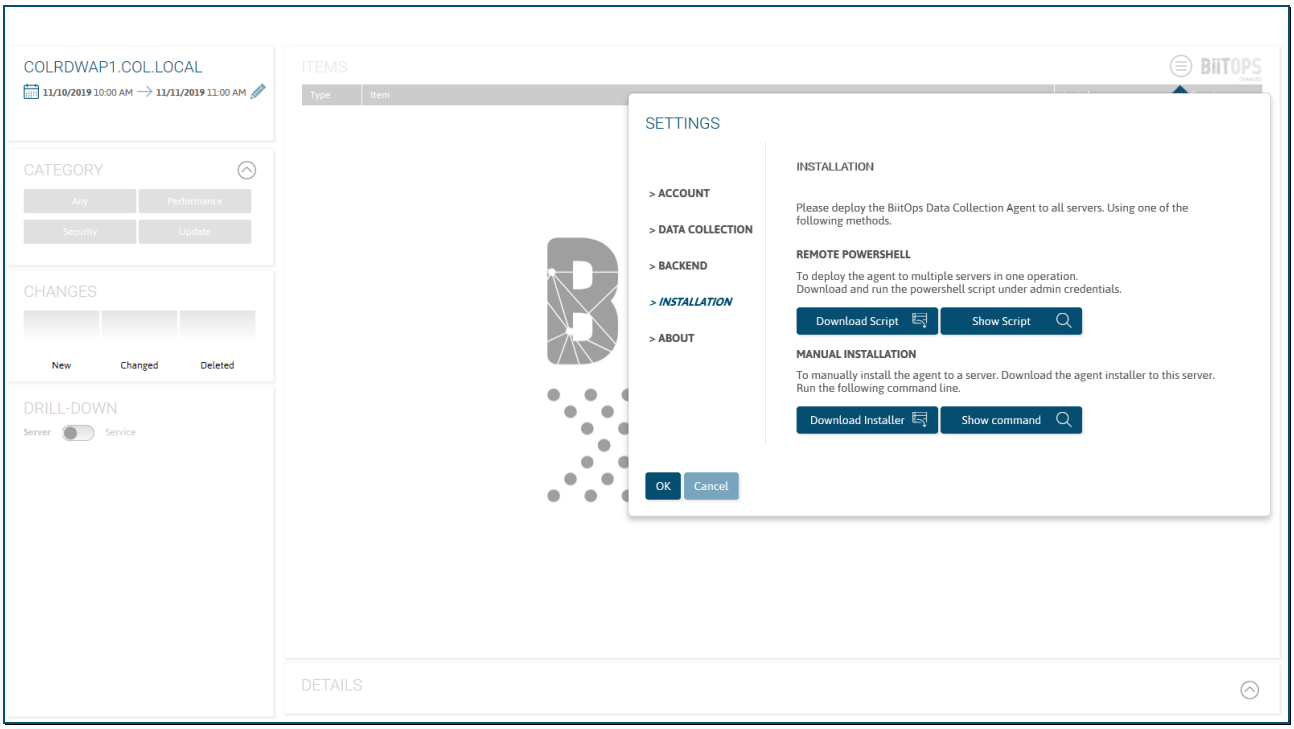
> Note: Since Windows Admin Center stores this information in a per user profile, each user on the Windows Admin Center will need to complete step 4.



Once entered, an encrypted token will be placed in the Windows Admin Center user profile and used for future access to the BiitOps Changes Backend Solution.

C) DEPLOY THE DATA COLLECTION AGENT TO THE DESIRED SERVERS

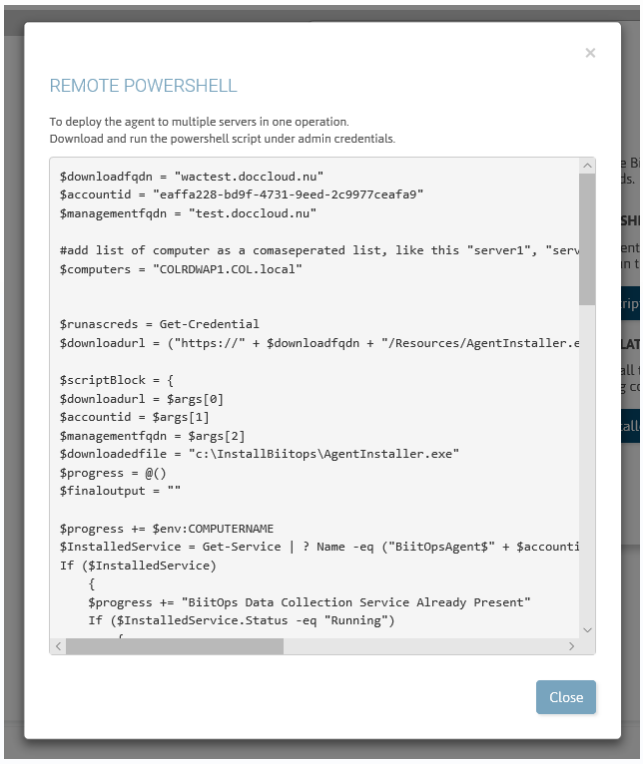
When connecting to a server not already running the data collection agent, you will see the screen below.



Once the Data Collection Agent is deployed to a server it creates a Windows Service, registers itself with the BiitOps Changes Backend Solution and automatically starts collecting configuration data.
The BiitOps Data Collection Service is configured to run with Below Normal CPU Scheduling, meaning it will not interfere with normal server operations during data collection.
Once the data collection has been running for a few hours, you will be able to see change data within the BiitOps Changes Extension in Windows Admin Center.

DEPLOY USING REMOTE POWERSHELL

Click *show script*



Click on the content field to copy the script to the clipboard.

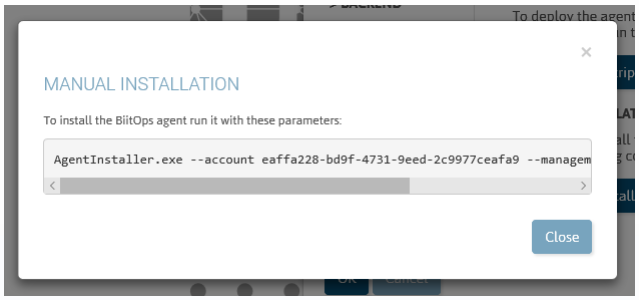
On you Admin Workstation open PowerShell ISE, paste the script and run it.

> To deploy simultaneously to multiple servers, simply add more servernames to the $Computers object and run the script.

DEPLOY MANUALLY OR USING DEPLOYMENT TOOL

Click *Download Installer* to download the installation package.

Click *Show Command*

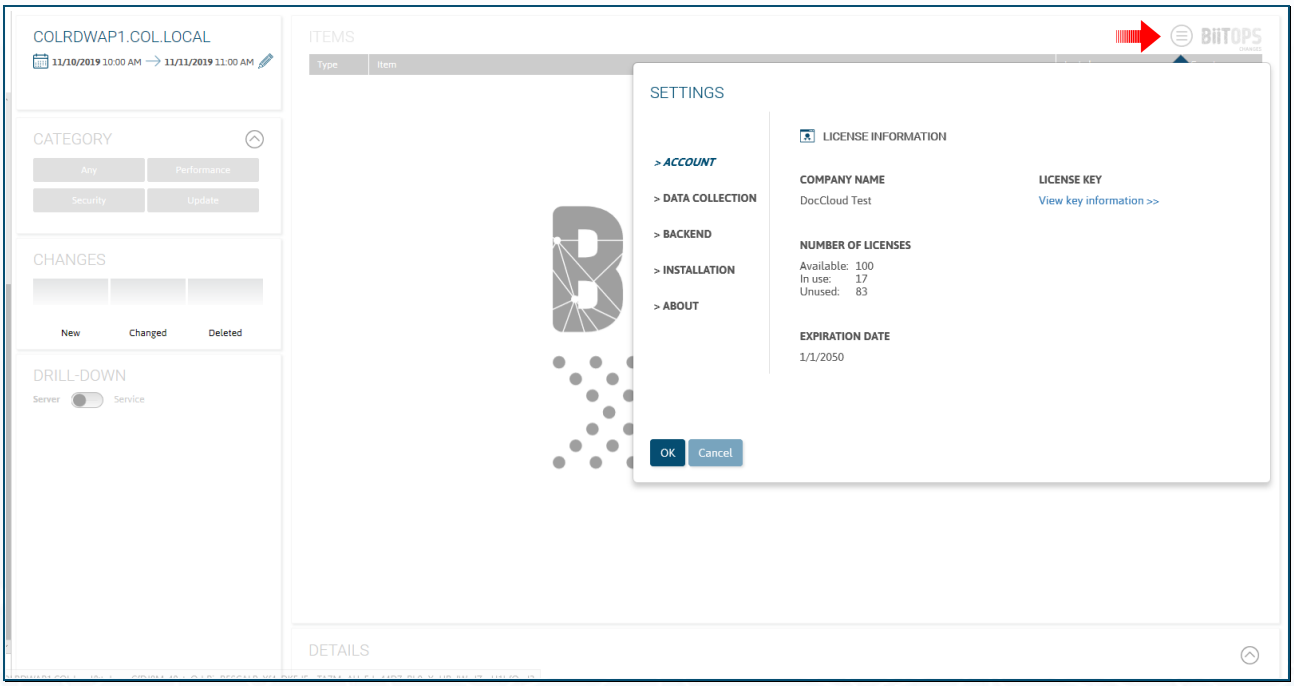


Click on the content field to copy the script to the clipboard.

> Syntax will look something like this:
>
> AgentInstaller.exe --account 9a90b05d-5e27-4526-a9c2-9a4140e4af7a --management "https://biitops.contoso.com/mgmt/"

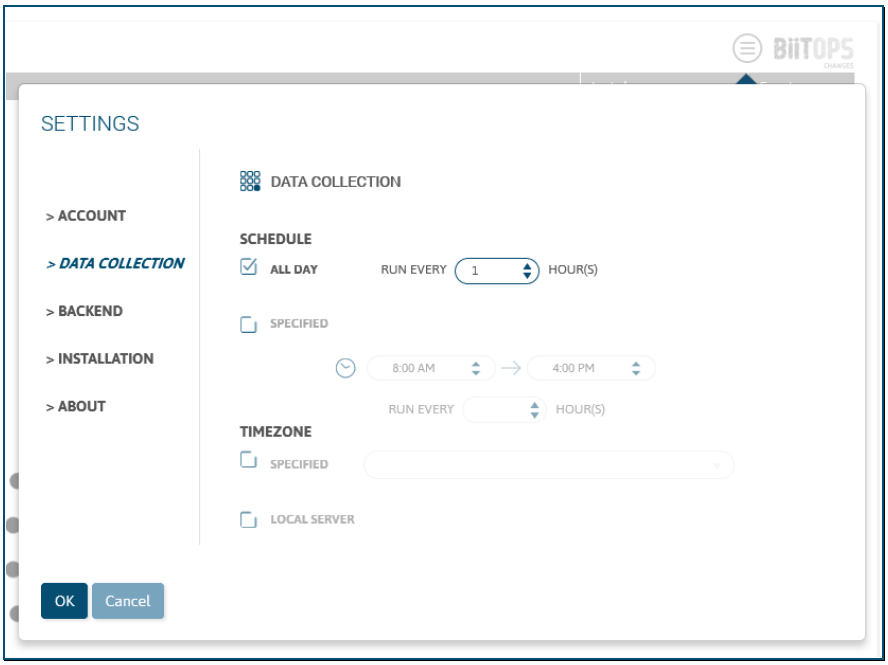
D) SET THE DESIRED DATA COLLECTION FREQUENCY

To customize the BiitOps Changes Solution, click the BiitOps Extension Setting icon, In the top left corner.



Click *Data Collection*

The default setting is All day every 1 hour.



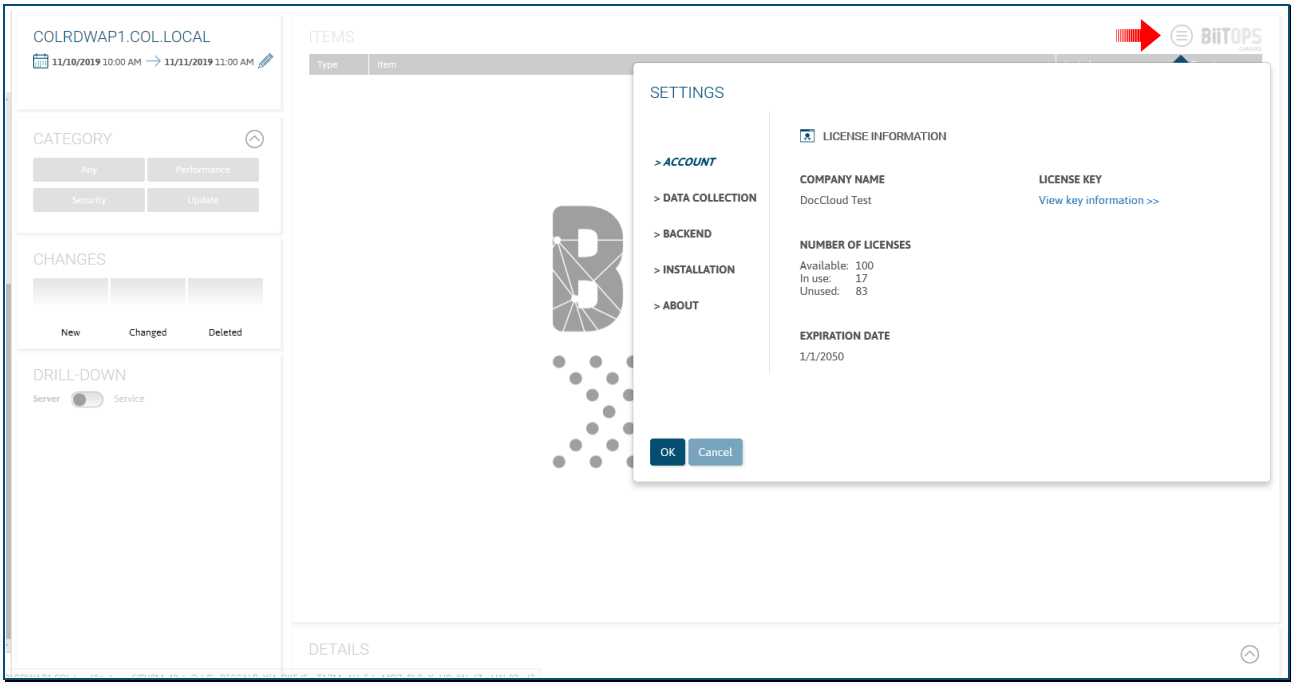
Data is collected at the selected intervals.
If a specified time interval is selected it is possible to use either a general time zone for all servers or the specific time zone configured in Windows on each server.
Using these fine grained settings will allow you to - for instance - collect data from European servers during European business hours while collecting data from US West Coast servers during US West Coast business hours.

Once done, click “Ok”.

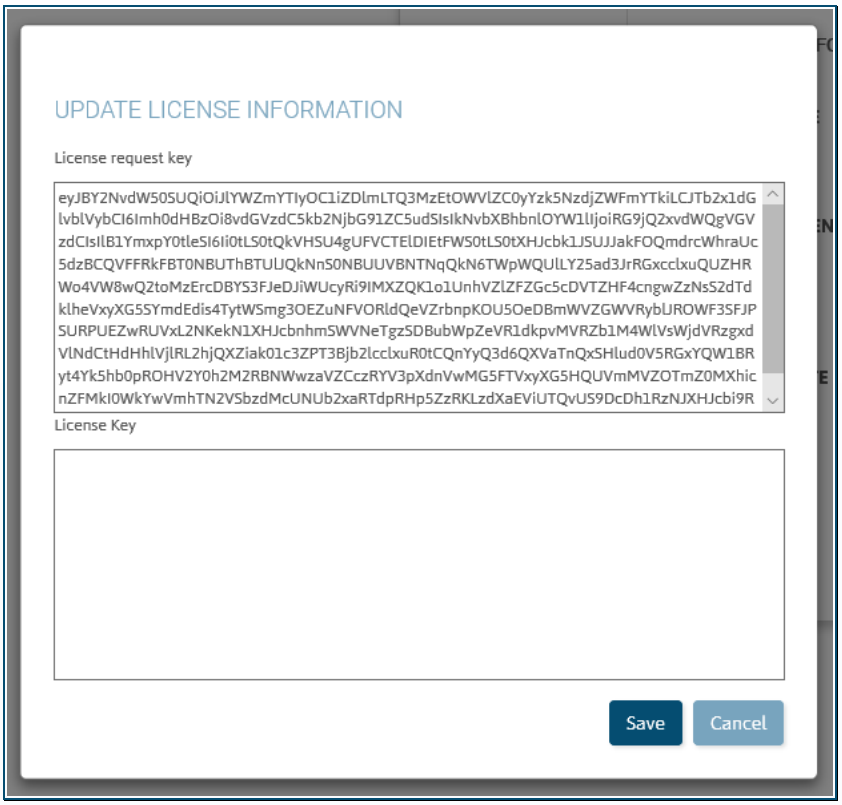
E) REQUEST AND INSTALL A LICENSE THROUGH THE BIITOPS CHANGES EXTENSION

The fully functional BiitOps Changes Solution is available to run without a license for a fixed number of servers at no cost, all future updates included.

Once you decide to deploy to more servers, you will simply need to install a license.



Click *View Key Information*



Click on the content field to copy the License Request Key to the clipboard.

Once the license key has been received, simply paste it into the License Key field and click *Save*.

Any data collection agent previously installed will now be automatically activated for data collection.

The license must be purchased directly from https://biitops.com
Click BUY NOW in the top right corner

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