



# ITSM Automation NG Express

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## Troubleshooting Guide

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This section provides guidelines that can help you troubleshoot problems that you may encounter when installing and using ITOM Container Deployment Foundation (CDF) and the ITSMA suite.

- [FAQs \(ITOM CDF\)](#)
- [FAQs \(ITSMA\)](#)
- [Troubleshoot HPE ITOM Container Deployment Foundation](#)
- [Troubleshoot the ITSMA suite](#)

## FAQs (ITOM CDF)

The following is a list of frequently asked questions about installing and using ITOM Container Deployment Foundation (CDF).

- [Installation](#)
- [LDAP](#)
- [Login](#)
- [Miscellaneous](#)

## Installation

Do we have a way to upgrade the suite images in ITOM Container Deployment Foundation?

**Answer:**

You will need to reinstall everything including ITOM Container Deployment Foundation and the suite if you want to upgrade the suite images.

Will the logs located in a pod be deleted when the pod is deleted?

All the suite logs are currently stored within the persistent volume so you will not lose them if the **Pods** go down.

What is the recommended way to restart the ITOM Container Deployment Foundation cluster (foundation components)?

**Answer:**

You can run the following command to delete pods (which will then be redistributed):

```
kubectl get pod --namespace=<namespace> | grep '<expression>' | cut -d " " -f1 - | xargs -n1 -P 10 kubectl delete pod --namespace=<namespace>
```

## How can I deal with the ITOM Container Deployment Foundation installation failure related errors?

**Answer:**

- Check if Docker(including bootstrap Docker) daemon is running or not.
- Identify the relevant service.
- Check the Pods status on back end.
- Run command: `kubectl describe pod podName -n namespaces` for more details.
- Check the containers' logs of relevant pods.

What could I do when a worker node installation failed with flannel related error?

**Answer:**

- Double check whether the FQDN is resolved to correct IP address on master node or not.
- On master node, run `kube-restart.sh` under **\$K8S\_HOME/bin** directory.
- Reinstall the worker node from the ITOM Container Deployment Foundation management portal.

Why couldn't I install a suite on the ITOM Container Deployment Foundation with a 503 nginx error for suite installer?

**Answer:**

Synchronize the time among the master nodes and the worker nodes.

Why could not the suite installation get started on ITOM Container Deployment Foundation with CrashLoopBackOff as the suite installer status?

**Answer:**

Follow the commands below to restart the suite-installer pod:

1. `cd /opt/kubernetes/objectdefs`  
`kubectl delete -f suite.yaml`
2. `cd /opt/kubernetes/objectdefs`  
`kubectl create -f suite.yaml`
3. Check whether the suite-installer pod is running or not:  
`kubectl get pods --namespace`

## LDAP

What is the difference between the LDAP in ITOM CDF and the LDAP in ITSMA?

**Answer:**

The LDAP feature in ITOM CDF was from IdM. ITOM CDF provides an LDAP interface to the suite team if they would like to share the IdM with ITOM CDF. The suite team can create the organization in the ITOM CDF UI, and use that for authentication; however, the suite team needs to do some integration with that. ITSMA uses its own IdM, and so LDAP in ITOM CDF is meaningless to ITSMA customers. In other words, for ITSMA, you need to configure LDAP in the ITSMA user interface (see [Configure an external LDAP server](#)).



## Login

Why couldn't I see the login page of ITOM Container Deployment Foundation management portal? The Docker daemon could not be started up with an error message: 'Gateway time out' when logging in to IDM.

**Answer:**

You need to start Kubernetes with the following commands:

```
cd $K8S_HOME/bin
./kube-start.sh
```

Why couldn't I log in to the ITOM Container Deployment Foundation management portal?

**Answer:**

- Make sure you entered the correct URL and port: `https://<master-hostname>:5443`.
- Make sure you can access the host: `ping [master-hostname]`.
- Check your proxy settings in the browser.
- Check the installation logs in `/opt/kubernetes/install-<timestamp>.log`.
- Empty the NFS folder and then install the ITOM Container Deployment Foundation.

Why couldn't I log in to the ITOM Container Deployment Foundation management portal? A login failure error: "The IDM service is not ready yet." and the pod:autopass-lm-, idm-, suite-installer- status are all CrashLoopBackOff ?

**Answer:**

1. Run the command: `kubectl delete -f autopass-lm.yaml; kubectl delete -f autopass-pg.yaml; kubectl delete -f idm.yaml; kubectl delete -f idm-pg.yaml; kubectl delete -f suite.yaml`
2. Delete the folder under autopass\_db, idm\_db, suite\_db under the NFS folder \$NFS\_HOME/baseinfra-1.0.
3. Run the command: `kubectl create -f idm-pg.yaml; kubectl create -f idm.yaml; kubectl create -f autopass-pg.yaml; kubectl create -f autopass-lm.yaml; kubectl create -f suite.yaml`

## Why couldn't I log in to Docker Hub?

**Answer:**

- Make sure the user name and password are correct.
- Make sure the Docker HTTP proxy is configured as below:  
/usr/lib/systemd/system/docker.service.d/http\_proxy.conf
- Make sure the host HTTP proxy is configured as below:  
export http\_proxy https\_proxy

## Miscellaneous

### Are there exceptions required to be added to the firewall policy?

**Answer:**

Browsers access the HPE ITOM Container Deployment Foundation via HTTPS ports (TCP/5443). End users need to add it to the firewall exception policy.

What could I do when a pod is in pending/ImagePullBackOff or ErrImagePull status and when running command: `kubectl describe pod podName -n namespaces`, an error: `image xxx not found`?

**Answer:**

Make sure the images are pushed into the private docker registry. Run the command: `docker pull [image name]` to double confirm.

What could I do when a pod is in ImagePullBackOff or ErrImagePull status and when running command: `kubectl describe pod [pod name] -n [namespace]`, an error: `Error while pulling image: Get http://localhost:5000/v1/repositories/xxx: dial tcp [::1]:5000: getsockopt: connection refused`?

**Answer:**

You can delete the Docker registry and registry proxy pods, and then restart them.

## FAQs (ITSMA)

The following is a list of frequently asked questions about installing and using ITSMA.

- [Installation](#)
- [Load balancing](#)
- [Databases](#)
- [Administration](#)
- [Data onboarding](#)
- [LDAP/SSO](#)
- [IDM](#)
- [DNS](#)
- [CIT Related](#)
- [SMSP/ Service Anywhere Architecture](#)
- [Load Balancer](#)
- [Reverse Proxy](#)
- [Oracle DB requirements](#)
- [HA/DR environment](#)
- [Miscellaneous](#)

## Installation

Do we support multiple master nodes for ITSMA?

**Answer:**

No, in this release, you must install a single master node. In addition, you cannot set up the Ingress and Egress services to support High Availability (HA).

How do I know the image tag for pods?

**Answer:**

Run the following command: **kubectl describe pods <pod names> -n <your namespace>**.

What shall I do if one of my pods failed?

**Answer:**

Run the following command: **kubectl delete pod <name of the pod that failed> -n core**.

Is there a way to remove and restart the ITSMA image installation?

**Question details:**

I ran the ITSMA suite installation but it failed somewhere. I had issues with the image push and one image was not pushed.

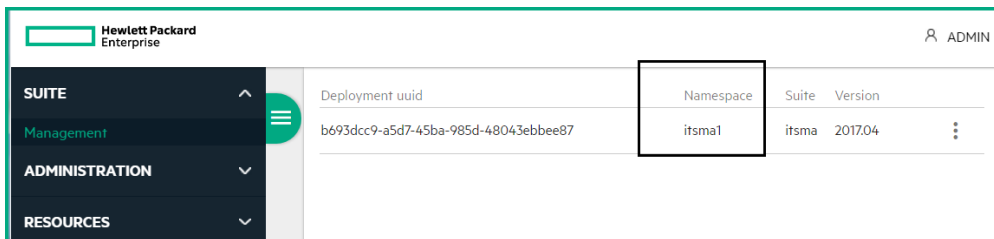
**Answer:**

Reimport the images by running the image import script again. You can run the image import script multiple times.

### How do I know the namespace being used for ITSMA?

**Answer:**

ITOM Platform supports only one instance of ITSMA. It automatically assigns a namespace for your ITSMA installation: **itsma1** for the first installation, **itsma2** for the second (you have to uninstall the first ITSMA instance first), and so on. To see the namespace being used for your current ITSMA installation, log in to ITOM CDF, and then navigate to **SUITE > Management**.



## Load balancing

### What is the load balancing mechanism in Service Management?

ITSMA uses nginx as a bundled load balancer. It uses nginx located in a K8S Ingress controller for the load balancing of Service Management: in front of the Service Management web tier, there is a frontend nginx for load balancing web access to the web tier; in front of the Service Management Server, there is a backend nginx for load balancing http access from the web tier to the Server.

## Databases

### How do I access the internal Postgres database for ITSMA CMDB?

**Question details:**

If CMDB uses the internal Postgres database, can I open the Postgres UI and browse through the contents of the database?

**Answer:**

The ITSMA CMDB's Postgres database has an exposed nodePort. You can use an external Postgres client to access the database server and browse through the contents of the database.

## Does ITSMA support database case-sensitivity for Service Management?

**Answer:**

The current release does not provide case-sensitivity options.

## Administration

### Is there a way to reset the ITSMA admin password if I forgot it?

**Answer:**

The current release does not support resetting this password from the server. Be sure to save the password of the **sysadmin** user in a safe place.

## Data onboarding

### How do I push CIs from a standalone UCMDB to ITSMA CMDB?

**Question details:**

I have ITSMA installed and have the standalone UCMDB. I want to push the CIs from the standalone UCMDB to ITSMA CMDB. What are the URL and host details that I should give the standalone UCMDB?

**Answer:**

The current release does not support pushing CIs from a standalone UCMDB to ITSMA CMDB.

## LDAP/SSO

### **In the current setup - People Information from multiple OUs is brought into SM using CIT scenarios. How will this work in ITSMA?**

**Answer:**

In the ITSMA suite, we still use HPE Connect-IT (CIT) to synchronize data from multiple OUs to the Service Management database. This means there is a CIT program outside of the container.

### **The customer uses SiteMinder for SSO, and ITSMA has its own LW-SSO. How will these two work together? Or can we only use SiteMinder SSO?**

**Answer:**

This is not supported yet. Currently, SAML2.0 SSO is not supported and only single domain LW-SSO is supported.

### **Can the existing SiteMinder agent work in the containerized ITSMA? OR the binary will have to be updated?**

**Answer:**

Not supported yet. Currently, SAML2.0 SSO is not supported and only single domain LW-SSO is supported.

## IDM

### **What is the role of IDM in ITSMA?**

#### **Answer:**

IDM is used for user authentication. IDM connects to the customer's LDAP server.

## DNS

### **What is the role of DNS in ITSMA?**

#### **Answer:**

Kubernetes DNS in ITSMA is only used for internal services.

### **Can we configure or use external DNS?**

#### **Answer:**

No.

## CIT Related

### **Currently, due to load balancer issues all integrations with Service Manager are implemented by connecting to a specific server/SM Servlet. How would this be done in ITSMA Containerized version?**

#### **Answer:**

ITSMA NG Express also provides an nginx service for integration, which can handle all stateful and stateless requests.

### **Can we direct the connections to a specific Node/SM Servlet in ITSMA or all the integrations have to be done through the ITSMA Load balancer?**

#### **Answer:**

In ITSMA, all integrations will be done through the load balancer.

### **What happens if the ITSMA load balancer fails or crashes? Will CIT/Webservice based integrations still work?**

#### **Answer:**

ITSMA provides a self-recovery mechanism for the load balancer. It is safer than Classic ITSMA. In the event that the load balancer is down, CIT does not work anymore.

### **How will ITSMA work with external mail servers for Notifications? Can this be configured?**

#### **Answer:**

Yes, ITSMA can work with an external mail server, which can be configured from the user interface.

## SMSP/ Service Anywhere Architecture

**Will Service Portal (part of the ITSMA containers) also use an external Oracle DB ? Or will it use the internal PostgreSQL DB?**

**Answer:**

Service Portal will use an external PostgreSQL database for production. The internal PostgreSQL is only for demonstration purposes.

## Load Balancer

**What if the customer plans to use a Citrix based load balancer outside of ITSMA? Will there be any impact on the ITSMA Load Balancer?**

**Answer:**

As ITSMA has its own load balancer already, it does not need an external Load Balancer.

**Do we really need an external Load Balancer if ITSMA is providing a load balancer itself?**

**Answer:**

As ITSMA has its own load balancer already, it does not need an external Load Balancer.

**What happens if the Load Balancer fails within ITSMA?**

**Answer:**

The 2017.04 release does not support high availability (HA) deployments. This release provides a self-recovery mechanism to restart the load balancer and therefore it is safer than classic ITSMA.

**If an external Load balancer is also used, will the external load balancer connect with the ITSMA load balancer?**

**Answer:**

As ITSMA has its own load balancer already, it does not need an external Load Balancer. In the event that you have already an external load balancer, it connects to the ITSMA load balancer.

## Reverse Proxy

**What is the role of Reverse Proxy?**

**Answer:**

It is nginx based, the single gateway for incoming traffic. It works for routing, and authentication gateway.

## Oracle DB requirements

**Will all the applications part of ITSMA, connect to their own specific Oracle database or will there be a single Oracle DB? Since all the applications within ITSMA use external Oracle DB , will the Oracle Table space requirements increase drastically, as multiple applications would want to store the data in the same DB?**

**Answer:**

ITSMA does not provide an Oracle database. Service Manager and UCMDB will use an external Oracle Database and Service Portal will use an external PostgreSQL. Multiple application will share the same Oracle instance with different schemas, and then they can share one table space or have separate table spaces. The configuration is the same as the classic configuration.

## HA/DR environment

**What happens to the services running on a worker node, if it goes down? Will the services get transferred to another worker node?**

**Answer:**

When one worker node goes down, all services running on this worker node will be re-created on other worker nodes automatically.

**In an HA environment, do we have to have 1:1 mapping between worker nodes?**

**Answer:**

No. To make an HA environment stable, assign more resources to the ITSMA environment. 80% resource usage is better.

## Miscellaneous

What shall I do if a 502 error occurs when users attempt to log in to ITSMA?

**Answer:**

Restart the frontend ingress by running the following command: **kubectl delete pod**.

Is it possible to run Service Management background schedules on a separate pod?

**Question details:**

When we create any custom Service Management background schedulers, is it possible to run those schedules on a separate pod? How do I create a new pod to run custom schedulers with replication controllers features? One of the use cases is that, in a production environment, when there are huge backlogs for SLAs, we want to create custom schedulers and run them in a separate pod to balance the backlogs.

**Answer:**

No. Currently, ITSMA does not support creating a custom pod for schedulers.

Can I add more parameters to track Service Management performance?

**Question details:**

How do I add parameters such as **alertlimit**, and **alertlog** that are available in HPE Service Manager to capture long-running queries?

**Answer:**

Currently, ITSMA does not allow you to add such parameters. You can only specify debugging parameters that are exposed on the Suite Configuration user interface. For details, see [Configure log level for debugging](#).



# Troubleshoot HPE ITOM Container Deployment Foundation

This section provides information that can assist you in troubleshooting ITOM Container Deployment Foundation related issues.

- [Manual verification commands](#)
- [ITOM Container Deployment Foundation logs](#)
- [Support toolset](#)
- [ITOM Container Deployment Foundation issues](#)

## Manual verification commands

You can use the following commands when troubleshooting ITOM Container Deployment Foundation. For example, you can use them to list the namespaces and services.

Command	Description
<b>kubectl</b>	The command to interact with K8S.
<b>kl cluster-info</b>	Summarizes information about some of the services that are running on the cluster, including <b>Kubernetes master</b> , <b>KubeDNS</b> for service discovery, and the endpoints of the <b>KubeRegistry</b> (if you are running a registry).
<b>kl get</b>	To get various entities within K8S. You have to specify the resource type. <b>Example:</b>  <code>kubectl get nodes</code> : to list all the nodes in the cluster.  <code>kubectl describe nodes [node_IP]</code> : to get more specific information on the node such as labels, events, capacity, CPU, memory, the maximum of pods it can support, system information on the node, external IP address, the pods that are running, the list of namespaces, and resources, and more.
<b>kl get pods</b>	To list all pods in the default namespace (used to separate the base infrastructure services from the deployed suites).
<b>kl get pods --namespace=kube-system</b>	To list all the pods that are running in the namespace where base ITOM Container Deployment Foundation and K8S pods are running.
<b>kl get pods --all-namespaces</b>	To list all the pods that are currently running in the cluster.

<b>kubectl describe pod podName -n namespaces</b>	<p>To view details about the specified pod in the specified namespace.</p> <p>A pod is a unit of scheduling inside K8S. A container is always run inside a pod. The details are the containers it is running, the image it is running, the port it is exposing, and the command (/hyperkube) that is running inside the container itself with their options, volumes, and more.</p>
<b>kl exec -t suite-installer --namespace=kube-system --sh</b>	<p>To view what is running in the suite installer pod on the specific namespace.</p> <p>This displays what is running inside the container. Use exit to get out of it.</p>
<b>kl get services --all-namespaces</b>	<p>To view all the services running in the cluster.</p> <p>If a pod needs to expose what it is doing outside the pod, you need to create a service for it. Some services are internal and some are external. When you install a cluster there are a number of services that are automatically installed. <b>autopass-ln-svc</b> is an external service, <b>idmpostgresql-svc</b> used by the postgresql database that serves idm which is internal, <b>idm-svc</b> that is internal, <b>kube-dns</b> and <b>kube-registry</b> are also internal, <b>mng-portal</b> that is available externally, <b>postgresql-apln-svc</b> that serves the autopass also available internally, and the <b>suite-installer-svc</b> that is also available internally.</p>
<b>kubectl logs -f podName -n namespaces -c containerName --tail=n</b>	<p>To view the container logs in a pod.</p> <p><b>Example::</b></p> <pre>kubectl logs -f kube-registry-v0-bxg91 -n core kubectl logs idm-1465533124-s9z2i -n core -c idm --tail=5</pre>
<b>./kube-restart.sh</b>	<p>To restart the K8S cluster.</p> <div style="border: 1px solid #f0e68c; border-radius: 10px; padding: 10px; text-align: center; margin: 10px 0;"> <p>In <b>/opt/kubernetes/bin</b>, run: <code>./kube-restart.sh</code> to restart the K8S cluster.</p> </div>
<b>./kube-start.sh</b>	<p>To start the K8S cluster.</p> <div style="border: 1px solid #f0e68c; border-radius: 10px; padding: 10px; text-align: center; margin: 10px 0;"> <p>In <b>/opt/kubernetes/bin</b>, run: <code>./kube-start.sh</code> to start the K8S cluster.</p> </div>

<b>./kube-status.sh</b>	To display the status of the K8S cluster.  In <b>/opt/kubernetes/bin</b> , run: <code>./kube-status.sh</code> to view the status of the K8S cluster.
<b>./kube-stop.sh</b>	To stop the K8S cluster.  In <b>/opt/kubernetes/bin</b> , run: <code>./kube-stop.sh</code> to stop the K8S cluster.
<b>docker -H unix:///var/run/docker-bootstrap.sock ps</b>	To display containers in bootstrap Docker daemon.
<b>docker -H unix:///var/run/docker-bootstrap.sock logs [container Name]</b>	To view container logs in bootstrap Docker daemon.
<b>docker ps</b>	To display containers in main Docker daemon.
<b>docker logs [container name]</b>	To view container logs in main Docker daemon.

## Support toolset

ITOM Container Deployment Foundation (CDF) provides a support toolset that helps to collect information about Docker, Kubernetes, suites, commands, directories, and files as described below:

- Docker: containers, inspect, docker service systemd logs
- Kubernetes: nodes, pods, namespaces, images, containers, cluster-info, describe, and logs
- Suite: suite-db dump, suite data, modules, products deployments, and features
- Commands defined by users
- Directories and files defined by users

You can view the summary information on a console, and view detailed output information in an encrypted tar file.

## How to use the support toolset

To use the support toolset, follow these steps:

1. Log in to the master node.
2. Run the following command:  
**cd \$K8S\_HOME/tools/support-tool**
3. Run the following command:  
**# ./support-dump [ -c <dump-filename-with-path> ] [-u <username> [-p <password>]] [-P <package\_password>]**  
**Example usages:**  
Create a dumpfile with a default file name in a default directory.  
**# ./support-dump**  
Create a dumpfile with a specified file name in a specified directory. For example, create a dump.des3 in /var/test:  
**# ./support-dump -c /var/test/dump.des3**  
Create a dumpfile with a specified user name and password. For example, create a dumpfile with a default file name in a default directory with password 'abcdef'. Connect the suite-installer with 'admin' as the user and '123456' as the password:  
**# ./support-dump -u admin -p 123456 -P abcdef**
4. Run the following command to unpack the dumpfile:  
**# dd if=xxxx.des3 |openssl des3 -d -k <package\_password>|tar zxf -**

## How to use configuration files

The support toolset provides a configuration file with some predefined [commands], [files], and [dirs] to specify information collection details. This default configuration file is: conf/supportdump.config.

You can define your own [commands], [files], and [dirs] in this configuration file. Additionally, you can create other configuration files in the same directory.

When using the configuration files, pay attention to the following:

- The outputs of the same command are saved into one file. For example, cat.out.
- All directories, files and outputs of commands are stored in the <local\_ip>-<NodeType>/os directory.
- The wildcard characters can be used in a file name and directory name. For example, /etc/sysconfig/network-scripts/ifcfg-\*
- Single environment variable is supported. For example, \${K8S\_HOME}/log.
- A file or files (separated by spaces) followed a directory will be excluded from the support toolset collection.

### Example usage:

```
`${K8S_HOME}/cfg *_User.json
```

The support toolset collects all files and directories in the `\${K8S\_HOME}/cfg` except the \*\_User.json file.

Below is the default configuration file (supportdump.config):

```

#(C) Copyright 2013-2016 Hewlett Packard Enterprise Development LP
[commands]
cat /proc/net/if_inet6
cat /proc/partitions
cat /sys/class/net/bond*/bonding/active_slave
crm_mon -rf1
df -a
df -h
dmidecode
drbd-overview
du -h --max-depth=5 / | sort -hr
ethtool eth0
fdisk -l
free -m
grep "model name" /proc/cpuinfo
head -n1 /etc/issue
hostname
ifconfig -a
iostat
ip -4 route show table all
ip -6 route show table all
ip addr show
ip route show
ipcs -l
ipcs -a
iptables -L
iptables -S
ip6tables -L
ip6tables -S
last reboot
lldpcli show neigh
ls -l /etc/pki/tls/certs/
ls -l /etc/pki/tls/private/
ls -l /etc/rc.d/rc3.d
lspci -vmm
lspci -vvvv
lvdisplay
mount | column -t
mpstat -P ALL
netstat -anp
netstat -g
ntpq -p
ps -e -ww -o pcpu,cpu,nice,state,cputime,args --sort pcpu | sed '/^ 0.0 /d'
ps -ef -ww
ps -ww -eo pcpu,pid,user,args | sort -k 1 -r | head -10
route -n
rpm -qa
rpm -qa hp-firmware\* | sort
top -n 1 -b -c
uname -a
vgdisplay
virsh list --all
virt-what
vmstat
vmware-toolbox-cmd -v
brctl show

```

```
sysctl -a

[files]
/etc/group
/etc/hosts
/etc/httpd/conf.d/ssl.conf
/etc/ntp.conf
/etc/partner_ntp.conf
/etc/passwd
/etc/system-release
/etc/resolv.conf
/etc/resolv.conf_alt
/etc/sysconfig/i18n
/etc/sysconfig/ip6tables
/etc/sysconfig/iptables
/etc/sysconfig/network
/etc/sysctl.conf
/mnt/usb/cic-manager-setup-config.json
/root/.virtinst/virt-install.log
/updatelogs/db_install_upgrade.log
/updatelogs/update.log
/usr/lib/rpm/rpm.log
/var/lib/rabbitmq/erl_crash.dump
/var/run/utmp
/var/tmp/usbAutoSetupTrace.log
/ci/logs/dynamic-configuration.log
/ci/etc/service-console
/ci/etc/pwreset/disable-root
/ci/etc/devlogin-enabled
/etc/pam.d/system-auth
${K8S_HOME}/install*.log
${K8S_HOME}/version.txt

[dirs]
/etc/sysconfig/network-scripts/ifcfg-*
/updatelogs/db_install_upgrade.log.*.gz
/updatelogs/failurelogs/failure*
/updatelogs/update.log.*
/var/cpq
/var/lib/pgsql/pg_logs
/var/log
/etc/sysctl.d/*
${K8S_HOME}/cfg *_User.json
${K8S_HOME}/log
${K8S_HOME}/manifests
${K8S_HOME}/objectdefs
${K8S_HOME}/runconf
${K8S_HOME}/scripts/*.*
${K8S_HOME}/ssl
```

## Dump file

The default support dump file is: dmp/support\_data\_YYYYMMDD-hhmmss.des3. The dump file contains the support\_data\_YYYYMMDD-hhmmss.log of the running support toolset and the ITOM\_Core\_Platform directory for the dump files. The table below describes the dump files in the ITOM\_Core\_Platform directory.

Name	Description	Type
<local_ip>-<NodeType>	<p>The directory of docker information and user defined information on the current node.</p> <ul style="list-style-type: none"> <li>• <b>docker</b> docker information dump files               <ul style="list-style-type: none"> <li><b>bootstrap:</b> <ul style="list-style-type: none"> <li>• <b>bootstrap_containers.out:</b> docker-bootstrap containers</li> <li>• <b>bootstrap_docker_inspect.out:</b> docker-bootstrap inspect</li> <li>• <b>journalctl_docker-bootstrap.out:</b> docker-bootstrap service log workload</li> </ul> </li> <li><b>workload :</b> <ul style="list-style-type: none"> <li>• <b>containers.out:</b> docker containers</li> <li>• <b>docker_inspect.out:</b> docker inspect information</li> <li>• <b>journalctl_docker.out:</b> docker service log</li> </ul> </li> </ul> </li> <li>• <b>os:</b> user defined commands, directories and files               <ul style="list-style-type: none"> <li>• <b>commands:</b> directory of output files of commands defined in the [commands] section in .config files. The file name format: &lt;command&gt;.out.</li> <li>• <b>other directories:</b> directories and files defined in the [files], and [dirs] sections in .config files. The structure of directories will be reserved.</li> </ul> </li> </ul>	Directory

Name	Description	Type
<b>global</b>	<p><b>deployment:</b></p> <ul style="list-style-type: none"> <li>• <b>suite_data:</b> JSON files of all suites data</li> <li>• <b>suite-db_pgdump.tar:</b> PostgreSQL db dump file of suite-db pod</li> <li>• <b>suite_features.out:</b> suite deployment and features</li> </ul> <p><b>kubernetes :</b></p> <p><b>cluster_info::</b></p> <ul style="list-style-type: none"> <li>• <b>cluster_info.out:</b> output of running command 'kubectl cluster_info dump'</li> <li>• <b>other dirs &amp; files:</b> generated by command 'kubectl cluster_info dump'</li> </ul> <p><b>kube_describe.out:</b> describe of all pods</p> <p><b>kube_summary.out:</b> namespaces, pv, pvc, nodes, deployments, services, pods, ingress</p> <p><b>platform:</b></p> <ul style="list-style-type: none"> <li>• <b>containers_by_pod.out:</b> all containers, images on all pods</li> </ul>	Directory

## Example: Run the support toolset

Below is a sample of running the support toolset on a console.

```
[root@SGDLITVM0719 support-tool]# ./support-dump
Management Portal user:admin
Password:
Package password:
Retype package password:
#####
ITOM Core Platform - Support Data Export
Date: 2017-03-08 13:30:11
Current node: xx.xxx.xxx.xxx
Node type: Worker
Docker: v1.12.6
Kubernetes: server-v1.4.3 client-v1.4.3
#####
-----
Docker Containers
Export: containers.out
Comments: on Worker node xx.xxx.xxx.xxx
-----
CONTAINER ID IMAGE STATUS
9cbcd51599a5 localhost:5000/nginx-ingress:0.8.3 Up 2 days
5efe4a972bb5 gcr.io/google_containers/pause-amd64:3.0 Up 2 days
...
-----
Docker bootstrap Containers
Export: bootstrap_containers.out
```



```

Comments: on Worker node xx.xxx.xxx.xxx
-----
CONTAINER ID IMAGE STATUS
832bbd87fee1 gcr.io/google_containers/flannel-amd64:0.5.5 Up 2 days
-----
Nodes
Export: kube_summary.out
-----
NAME STATUS AGE
xx.xxx.xxx.xxx Ready 2d
xx.xxx.xxx.xxx Ready 2d
sgdlitvm0590.mycompany.net Ready 2d
sgdlitvm0598.mycompany.net Ready 2d
sgdlitvm0729.mycompany.net Ready 2d
-----
Pods
Export: kube_summary.out
-----
NAMESPACE NAME READY STATUS RESTARTS AGE IP NODE
core apiserver-xx.xxx.xxx.xxx 1/1 Running 0 2d xx.xxx.xxx.xxx xx.xxx.xxx.xxx
core apiserver-sgdlitvm0590.mycompany.net 1/1 Running 0 2d xx.xxx.xxx.xx sgdlitvm0590.mycompany.net
...
-----
POD Containers
Export: containers_by_pod.out
-----
NAMESPACE POD NODE IMAGE CONTAINER CONTAINER_ID
core apiserver-xx.xxx.xxx.xxx xx.xxx.xxx.xxx gcr.io/google_containers/hyperkube:v1.4.3 apiserver
8e74804ee06e
...
core autopass-lm-116661985-hufdr xx.xxx.xxx.xxx localhost:5000/autopass-lms:10.0 autopass-lm 5154fe13fb
...
-----
Suite Deployment
Export: suite_features.out
-----
SUITE VERSION NAMESPACE DEPLOYMENT_STATUS INSTALL_DATE NFS_SERVER NFS_OUTPUT_PATH
itsma 2017.01 itsma1 DELETED 2017-03-06 14:25:40 SGDLITVM0668.mycompany.net /var/vols/itom/itsma/itsma-
itsma1
-----
Suite Features
Export: suite_features.out
-----
SUITE EDITION SELECTED FEATURE_SET FEATURE
itsma Express Edition true Smart Analytics Smart analysis
The Business Value of HPE ITSM Automation
Universal CMDB UCMDB
Service Manager <h2>Welcome to ITSMA</h2>
Faster Service. Better Experience. Lower Costs.
Docker inspect ..... exported to docker_inspect.out & bootstrap_docker_inspect.out
Docker cluster-info dump ..... exported to cluster_info.out
Docker describe ..... exported to kube_describe.out
Suite DB ..... get dump file from suite-db-4070668108-0c5pf failed!
Suite data JSON files ..... Not get suite-installer pod on current node
Making OS commands & files list ... done
Running OS commands in list ..... done

```

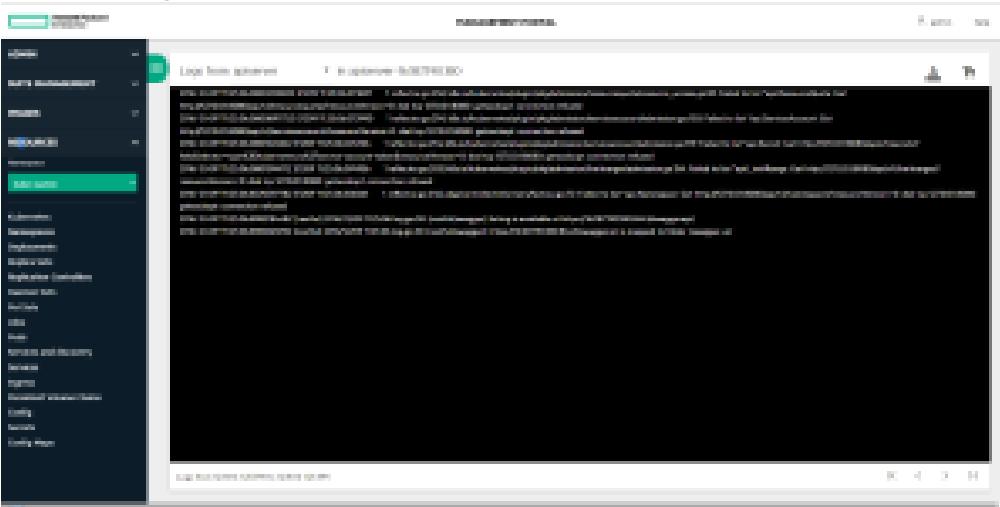
```
Collecting OS files in list ..... done
Packing dump files ... package file is /opt/kubernetes/tools/support-tool/dmp/
support_data_20170322-150008.des3

Please use below command to uncompress the package file:
dd if=support_data_20170322-150008.des3 |openssl des3 -d -k <your_password>|tar zxf -
```

## ITOM Container Deployment Foundation logs

To view the ITOM Container Deployment Foundation (CDF) log files, follow these steps:

1. In the ITOM Container Deployment Foundation navigation pane, click **RESOURCES > Pods**.
2. Click the relevant pod.
3. Click **View logs** in the Pod area.



All suite logs are currently stored within a persistent volume so that they are not lost even if the pods go down.

### ITOM CDF log UI

UI element	Description
<b>Tt</b>	Toggles the size of the font used in the log
<b>A</b>	Toggles the colors of the log: white characters on black background or black characters on white background
Logs from 10/31/16 7:23 AM to 10/31/16 7:37 AM	Timestamp of the currently displayed log
<b>&lt;&lt; &lt; &gt; &gt;&gt;</b>	Buttons to navigate through logs

## ITOM Container Deployment Foundation issues

The following is a list of ITOM Container Deployment Foundation related issues and their solutions.

### Failed to start the IdM service of ITOM Container Deployment Foundation

To solve this problem, change the proxy settings in the autopass-lm.yaml file to an empty value:

```
env:  
- name: http_proxy  
  value: ""  
- name: https_proxy  
  value: ""
```

### Unable to connect to the server: invalid character "{" in host name?

Check if the firewall is disabled on the NFS server or not.

### No Common Name set for a Pod certificate

To solve this problem:

1. Update the vault token  
`run ./update_kubevaulttoken`
2. Recreate all pods:  
**`run ./kube-redeploy.sh`**
3. Restart Docker:  
**`docker ps|grep kube-registry-proxy|grep -v pause|awk '{print $1}'|xargs docker restart`**

### Token has expired

This problem may occur when an internal vault token has expired.

To solve this problem:

1. On the master node, run the following command:  
**`update_kubevaulttoken`** under **`/opt/kubernetes/bin`**
2. Restart Docker:  
**`systemctl restart docker`**

Another reason is that time is not synchronized between a worker and the master, or a POD and the VM. Fixing the time synchronization issue will solve this problem.

### The autopass-lm-xxx-xxx pod in the core (namespace) crashes easily

The autopass-lm-xxx-xxx pod easily crashes and cannot return to normal after many restarts. This problem is caused by vault token expiration.

To solve this problem:

1. Update vault token:  
**./update\_kubevaulttoken**
2. Recreate all pods:  
**./kube-redeploy.sh**

## Troubleshoot the ITSMA suite

This section provides information that can assist you in troubleshooting the ITSMA suite related issues.

- [ITSMA suite logs](#)
- [ITSMA suite issues](#)
- [ITSMA service dependency](#)

## ITSMA suite logs

You can find ITSMA suite log information from the log files described in the following table.

All suite logs are currently stored within a persistent volume so that they are not lost even if the pods go down.

Component	Log and data directories	Notes
Service Management (SM)	<ul style="list-style-type: none"> <li>• General: <code>/var/vols/itom/itsma/itsma-&lt;namespace&gt;/logs/sm-9.52</code></li> <li>• Database: <code>/var/vols/itom/itsma/itsma-&lt;namespace&gt;/db/sm</code></li> </ul>	<p>The following is a list of the Service Management services:</p> <ul style="list-style-type: none"> <li>• scheduler: SM background scheduler responsible for running SM schedulers</li> <li>• gossip: Docker container responsible for communications among RTE nodes</li> <li>• irque: Docker container to write accumulated updates into the IR index files</li> <li>• rte: SM RTE service</li> <li>• integration: the integration service provided by the SM RTE docker container</li> <li>• webtier: SM web tier service</li> <li>• mobility: SM Mobility service</li> </ul>
Service Portal	<code>/var/vols/itom/itsma/itsma-&lt;namespace&gt;/logs/propel</code>	
UCMDB	<ul style="list-style-type: none"> <li>• General: <code>/var/vols/itom/itsma/itsma-&lt;namespace&gt;/logs/ucmdb-10.32</code></li> <li>• Database: <code>/var/vols/itom/itsma/itsma-&lt;namespace&gt;/db/ucmdb</code></li> </ul>	
ITSMA suite landing page	<code>/var/vols/itom/itsma/itsma-&lt;namespace&gt;/landing-page/logs</code>	

Suite Configuration	<ul style="list-style-type: none"> <li>• Yaml files: /var/vols/itom/itsma/itsma-&lt;namespace&gt;/data/itsmaconfig/yamls</li> <li>• Logs: /var/vols/itom/itsma/itsma-&lt;namespace&gt;/logs/itsmaconfig-1.0</li> </ul>	
HPE Identity Manager (IdM)	<ul style="list-style-type: none"> <li>• Logs: /var/vols/itom/itsma/itsma-&lt;namespace&gt;/logs/idm</li> <li>• Data: /var/vols/itom/itsma/itsma-&lt;namespace&gt;/data/idm/seeded_data</li> <li>• Database: /var/vols/itom/itsma/itsma-&lt;namespace&gt;/db/idm</li> </ul>	
Auth application	/var/vols/itom/itsma/itsma-<namespace>/logs/auth	
itsma-installer	yaml files: /var/vols/core/suite-install/itsma/output	
Smart Analytics	<ul style="list-style-type: none"> <li>• Logs: /var/vols/itom/itsma/itsma-&lt;namespace&gt;/logs/idol</li> <li>• Config: /var/vols/itom/itsma/itsma-&lt;namespace&gt;/config/idol</li> <li>• Data: /var/vols/itom/itsma/itsma-&lt;namespace&gt;/data/idol</li> </ul>	
Openldap	<ul style="list-style-type: none"> <li>• Data: /var/vols/itom/itsma/itsma-&lt;namespace&gt;/data/openldap</li> <li>• Logs: /var/vols/itom/itsma/itsma-&lt;namespace&gt;/logs/openldap-2.4.41</li> </ul>	
Ingress frontend and backend	/var/vols/itom/itsma/itsma-<namespace>/logs/ingress	

## ITSMA service dependency

If one or multiple ITSMA services are not working correctly, you can use the following service dependency information to troubleshoot the possible root cause for service failures.

- [Suite core services](#)
- [Service Management services](#)
- [Smart Analytics](#)
- [Service Portal](#)

- [CMDB services](#)

## Suite core services

Service	Dependency
auth	No hard dependency in general. It is recommended that you check the following services in this order: openldap-rc/idm-postgresql > idm > auth Other services are independent of all the services.
idm-postgresql	
idm	
itsma-config-rc	
itsma-landing-page	
nginx-ingress-controller-back	
nginx-ingress-controller-front	
openldap-rc	

## Service Management services

The start sequence of the Service Management services are as follows

1. sm-postgres
2. sm-rte-pre
3. sm-rte-post
4. sm-rte-gossip
5. sm-rte
6. sm-rte-integration, sm-rte-irque, sm-rte-scheduler, sm-webtier, sm-mobility
7. sm-chat

Service	Dependency
sm-postgres	None
sm-rte-pre	sm-postgres
sm-rte-post	sm-rte-pre
sm-rte-gossip	sm-rte-post

sm-rte	sm-rte-gossip
sm-rte-integration	sm-rte
sm-rte-irque	
sm-rte-scheduler	
sm-webtier	
sm-mobility	
sm-chat	sm-rte-integration

## Smart Analytics

All the Smart Analytics pods are started by the smarta-installer service.

Service	Dependency
smarta-idolfarm-config	None
smarta-installer	None
smarta-smsp-con-1a	None
smarta-smsp-con-1b	None
smarta-smsp-con-2a	None
smarta-smsp-con-2b	None
smarta-smsp-dah	smarta-smsp-con-1a smarta-smsp-con-1b smarta-smsp-con-2a smarta-smsp-con-2b
smarta-smsp-dih	smarta-smsp-con-1a smarta-smsp-con-1b smarta-smsp-con-2a smarta-smsp-con-2b
smarta-smsp-qms	None
smarta-ss-agent	None



smarta-ss-cfs	None
smarta-ss-con-1a	None
smarta-ss-con-1b	None
smarta-ss-con-2a	None
smarta-ss-con-2b	None
smarta-ss-dah1	smarta-ss-con-1a smarta-ss-con-1b smarta-ss-con-2a smarta-ss-con-2b
smarta-ss-dih	smarta-ss-con-1a smarta-ss-con-1b smarta-ss-con-2a smarta-ss-con-2b
smarta-ss-imgsvr	None
smarta-st-con-1	None
smarta-st-con-2	None
smarta-st-proxy	smarta-st-con-1 smarta-st-con-2

## Service Portal

Service	Dependency
propel-analytics	propel-catalog propel-postgresql propel-rabbitmq
propel-autopass	None
propel-autopass-import-license	None

propel-bpm	<ul style="list-style-type: none"> <li>idm</li> <li>propel-rabbitmq</li> <li>propel-catalog</li> <li>propel-sx</li> <li>propel-postgresql</li> <li>propel-ganglia-gmond</li> </ul>
propel-bpm-ui	<ul style="list-style-type: none"> <li>propel-bpm</li> <li>propel-launchpad</li> <li>propel-autopass</li> <li>propel-catalog</li> <li>propel-sx</li> </ul>
propel-catalog	<ul style="list-style-type: none"> <li>propel-sx</li> <li>propel-bpm</li> <li>propel-postgresql</li> <li>idm</li> <li>propel-ganglia-gmond</li> <li>propel-search</li> <li>propel-rabbitmq</li> </ul>
propel-catalog-ui	<ul style="list-style-type: none"> <li>propel-launchpad</li> <li>propel-autopass</li> <li>propel-postgresql</li> <li>propel-catalog</li> <li>propel-bpm</li> <li>propel-rabbitmq</li> <li>propel-notification</li> </ul>
propel-diagnostics	<ul style="list-style-type: none"> <li>propel-search</li> <li>propel-catalog</li> <li>propel-sx</li> <li>idm</li> <li>idm</li> <li>propel-autopass</li> <li>propel-launchpad</li> <li>propel-portal</li> <li>propel-sx-client</li> <li>propel-subscription-ui</li> <li>propel-catalog-ui</li> <li>propel-sx-ui</li> <li>propel-idm-admin</li> <li>propel-autopass-ui</li> <li>propel-bpm</li> <li>propel-bpm-ui</li> </ul>

propel-diagnostics-ui	propel-sx propel-diagnostics propel-autopass propel-launchpad propel-ganglia-ui
propel-external-entities-ui	propel-postgresql propel-launchpad propel-autopass propel-catalog propel-notification propel-rabbitmq
propel-ganglia-gmetad	None
propel-ganglia-gmond	None
propel-ganglia-ui	None
propel-idm-admin	propel-launchpad propel-autopass
propel-launchpad	propel-autopass propel-postgresql propel-search propel-catalog propel-rabbitmq propel-notification propel-sx propel-dashboard propel-gateway
propel-notification	propel-rabbitmq propel-postgresql idm
propel-portal	propel-launchpad propel-catalog propel-autopass propel-postgresql propel-search propel-rabbitmq propel-notification propel-sx

propel-postgresql	None
propel-propeltool	idm propel-sx sm-rte
propel-rabbitmq	None
propel-search	propel-idol propel-catalog
propel-subscription-ui	propel-launchpad propel-autopass propel-postgresql propel-catalog propel-sx propel-rabbitmq propel-notification
propel-survey	idm sm-rte
propel-survey-ui	propel-launchpad propel-survey propel-autopass propel-rabbitmq propel-notification
propel-sx	propel-ganglia-gmond propel-rabbitmq propel-portal propel-catalog propel-bpm
propel-sx-client-ui	propel-launchpad propel-sx propel-autopass propel-catalog propel-search propel-postgresql sm-rte propel-rabbitmq propel-notification

propel-sx-ui	propel-launchpad propel-autopass propel-diagnostics propel-postgresql propel-catalog propel-sx propel-ganglia-ui propel-rabbitmq propel-notification
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## CMDB services

The postgresql-ucmdb service starts first, and then others can start at the same time.

Service	Dependency
postgresql-ucmdb	None
ucmdb	postgresql-ucmdb
ucmdb-probe	ucmdb
Ucmdb-browser	
ucmdb-solr	None

## ITSMA suite issues

The following are tips for troubleshooting miscellaneous issues with the ITSMA suite.

### Pods remain in terminated status

You can run the following command to remove such pods:

```
kubectl delete pod [POD NAME] --grace-period=0
```

### Unable to connect to the server: invalid character "{" in host name

To solve this problem, make sure that the firewall is disabled on the NFS server.

### Suite is Pending after a worker node reboot

It is a known issue that rebooting a worker node will cause the status of the ITSMA suite to change to Pending.

To avoid this issue, do not reboot a worker.

## Some pods are in ErrImagePull status during installation

Use one of the following workarounds:

- Wait for a moment. The pod will retry an image pull.
- On the worker node where the pod is running, run the following command:  
`docker pull XXX`

## A 503 nginx error for the Suite Installer

The following error occurs when running the Suite Installer:

```
Warning FailedSync Error syncing pod, skipping: [failed to
"InitContainer" for "install" with RunInitContainerError: "init
container \"install\" exited with 1", failed to "StartContainer" for
"install" with CrashLoopBackOff?
```

This is because time is not synchronized between the master node and worker node.

Solve this problem with one of the methods.

### Method 1:

Synchronize time between the master and worker nodes, and then start over.

### Method 2:

Make `suit-config-pod-itsma` run on the master node by adding the `nodeSelector` attribute in the `suit-config.yaml` file:

1. Open the yaml file:  
`vi /var/vols/itom/core/suite-install/itsma/suite_config_template.yaml`
2. Add the 'nodeSelector' attribute:  

```
nodeSelector:
  master: "true"

containers:
- name: suite-config
```
3. Run these commands:  

```
cd /var/vols/itom/core/suite-install/itsma
kubectl delete -f suite_config.yaml
rm -rf suite_config.yaml
```
4. Reinstall the ITSMA suite in the ITOM CDF UI.

## Suite pods have errors and cannot recover

Reinstall the suite:

1. Run the following commands:
 

```
kubectl delete namespace {yourNamespaces} && sleep 60
rm /var/vols/itom/core/suite-install/itsma/suite_config.yaml
```
2. Reinstall the suite from the ITOM CDF UI.

Be sure to use a new namespace.

## Failed to pull images from the localhost because of a "Status 503" error

The images have been pushed into the local registry, but cannot be pulled from the localhost:5000 registry. After describing the pod, the following error is returned:

Error: Status 503 trying to pull.....

This is because the pod kube-registry-v0-xxx is restarted, but the registry proxy is down on the server. To solve this problem:

1. Restart the pods kube-registry-proxy-xxx on all master nodes and worker nodes with the following command:
 

```
docker ps|grep kube-registry-proxy|grep -v pause|awk '{print $1}'|
xargs docker restart
```
2. Run the following command to make sure that the local registry is connected:
 

```
curl http://localhost:5000/v2/_catalog
```

## Log error: No License File, use InstantOn

When installing the suite, many pods such as sm-rte-xxx are in CrashLoopBackOff status. The following error occurs in the pod log:

No License File, use InstantOn.

To solve this problem, restart the server and increase the CPU and Memory.

## Rebranding is impossible for the suite components

This is a limitation of the current release.

## How do I know a service port that is exposed to external applications?

The ports of some services of the suite are exposed to external applications. To get the port of a service:

1. Run the following command:

```
kubectl describe svc {service-name} -n {namespace};
```

2. Find the nodePort value, which is the port.

You can access it by {EXTERNAL\_ACCESS\_HOST}:{service-nodePort} to access it.

{EXTERNAL\_ACCESS\_HOST} is defined in the install.properties file when you install ITOM CDF.

## ITSMA is down

The suite is down and you cannot access ITSMA. The pods used to be running in parallel; however, all the pods are now running on a single node.

To solve this problem:

You can check node status by running the following command: **kubectl describe node**. Pay attention to the events and resource parts. To ensure a stable ITSMA deployment, we recommend using one master node and at least three worker nodes, depending on your suite size. For more information, see [Sizing recommendations](#).

## Cannot reinstall ITSMA

After you uninstall ITSMA and attempt to reinstall ITSMA, the installation fails because of an error that resembles the following:

**Tolerations:** <none>

**Events:**

FirstSeen	LastSeen	Count	From	SubobjectPath	Type	Reason	Message
11h	<invalid>	134	{kubernetes.io/hostname}	spec.initContainers{install}	Normal	Pulled	Container ima already present on machine
11h	<invalid>	133	{kubernetes.io/hostname}		Warning	FailedSync	Error syncing install with RunInitContainerError: "init container \"install\" exited with 1"
10h	<invalid>	125	{kubernetes.io/hostname}	spec.initContainers{install}	Normal	Created	(events with common reason co
10h	<invalid>	125	{kubernetes.io/hostname}	spec.initContainers{install}	Normal	Started	(events with common reason co
11h	<invalid>	2937	{kubernetes.io/hostname}	spec.initContainers{install}	Warning	BackOff	Back-off restarting failed do
11h	<invalid>	2913	{kubernetes.io/hostname}		Warning	FailedSync	Error syncing pod, skipping: nInitContainerError: "init container \"install\" exited with 1", failed to "StartContainer" for "install" with CrashLoopBackOff: "Back-off 5m0s restarting failed container=install pod=propel-postgresql-0x"]

This problem occurs because time synchronization gets lost between the master node and the worker nodes. To resolve this problem, configure time synchronization between the nodes and then reinstall ITSMA.



## Error: Status 503 trying to pull...

The images have been pushed into the local registry but cannot be pulled from the localhost:5000 registry. After you describe the pod, the following Error is displayed: Status 503 trying to pull...

The rootcause is that as the pod kube-registry-v0-xxx is restarted, the registry proxy is down on the server. To solve this issue, follow these steps:

1. Restart the pods kube-registry-proxy-xxx on all of the master and worker nodes by running the following command:  
**docker ps|grep kube-registry-proxy|grep -v pause|awk '{print \$1}'|xargs docker restart**
2. Run the following command to check if the local registry is connected:  
**curl http://localhost:5000/v2/\_catalog**

# Send documentation feedback

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**Feedback on ITSMA documents (ITSMA 201704)**

Just add your feedback to the email and click send.

If no email client is available, copy the information above to a new message in a web mail client, and send your feedback to [ovdoc-ITSM@hpe.com](mailto:ovdoc-ITSM@hpe.com).

We appreciate your feedback!