

Installation Instructions

Original Instructions



FactoryTalk Analytics LogixAI

Catalog Number FactoryTalk Analytics LogixAI

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LogixAI® software version 3.00.00 is Linux-based a containerized software application instead of an appliance. You can install the application onto your desired hardware. You can use a Linux-based ControlLogix® Compute module, an Edge computer, or virtual machine. This document describes how to install FactoryTalk® Analytics™ LogixAI software onto both hardware options.

IMPORTANT Throughout this document, the term ControlLogix Compute module references the ControlLogix Compute module, catalog number 1756-CMS1D1 Series B.

Summary of Changes

This publication contains the following new or updated information. This list includes substantive updates only and is not intended to reflect all changes.

Topic	Page
Added content explaining that you are only required to complete the section Configure the ControlLogix Compute Module if you are installed FactoryTalk Analytics LogixAI on a ControlLogix Compute module	3
Updated the tasks in section Add a User to the Sudoers List	6

Prerequisites

You must meet the following prerequisites to use FactoryTalk Analytics LogixAI:

- The target has Linux Debian 11.
- On the initial installation, make sure that the instance is connected to the internet.
- You must use a Linux system that has sudo access and you can execute system commands. For more information, see [Add a User to the Sudoers List on page 6](#).
- At least 2 Gb of memory must be available on the device.



ATTENTION: Read this document and the documents listed in the Additional Resources section about installation, configuration and operation of this equipment before you install, configure, operate or maintain this product. Users are required to familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws, and standards.

Activities including installation, adjustments, putting into service, use, assembly, disassembly, and maintenance are required to be carried out by suitably trained personnel in accordance with applicable code of practice. If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

注意：在安装、配置、操作和维护本产品前，请阅读本文档以及“其他资源”部分列出的有关设备安装、配置和操作的相应文档。除了所有适用规范、法律和标准的相关要求之外，用户还必须熟悉安装和接线说明。

安装、调整、投运、使用、组装、拆卸和维护等各项操作必须由经过适当训练的专业人员按照适用的操作规范实施。

如果未按照制造商指定的方式使用该设备，则可能会损害设备提供的保护。

ATENCIÓN: Antes de instalar, configurar, poner en funcionamiento o realizar el mantenimiento de este producto, lea este documento y los documentos listados en la sección Recursos adicionales acerca de la instalación, configuración y operación de este equipo. Los usuarios deben familiarizarse con las instrucciones de instalación y cableado y con los requisitos de todos los códigos, leyes y estándares vigentes.

El personal debidamente capacitado debe realizar las actividades relacionadas a la instalación, ajustes, puesta en servicio, uso, ensamblaje, desensamblaje y mantenimiento de conformidad con el código de práctica aplicable. Si este equipo se usa de una manera no especificada por el fabricante, la protección provista por el equipo puede resultar afectada.

ATENÇÃO: Leia este e os demais documentos sobre instalação, configuração e operação do equipamento que estão na seção Recursos adicionais antes de instalar, configurar, operar ou manter este produto. Os usuários devem se familiarizar com as instruções de instalação e fiação além das especificações para todos os códigos, leis e normas aplicáveis.

É necessário que as atividades, incluindo instalação, ajustes, colocação em serviço, utilização, montagem, desmontagem e manutenção sejam realizadas por pessoal qualificado e especializado, de acordo com o código de prática aplicável.

Caso este equipamento seja utilizado de maneira não estabelecida pelo fabricante, a proteção fornecida pelo equipamento pode ficar prejudicada.

ВНИМАНИЕ: Перед тем как устанавливать, настраивать, эксплуатировать или обслуживать данное оборудование, прочитайте этот документ и документы, перечисленные в разделе «Дополнительные ресурсы». В этих документах изложены сведения об установке, настройке и эксплуатации данного оборудования. Пользователям обязаны ознакомиться с инструкциями по установке и прокладке соединений, а также с требованиями всех применимых норм, законов и стандартов.

Все действия, включая установку, наладку, ввод в эксплуатацию, использование, сборку, разборку и техническое обслуживание, должны выполняться обученным персоналом в соответствии с применимыми нормами и правилами.

Если оборудование используется не предусмотренным производителем образом, защита оборудования может быть нарушена.

注意：本製品を設置、構成、稼働または保守する前に、本書および本機器の設置、設定、操作についての参考資料の該当箇所に記載されている文書に目を通してください。ユーザーは、すべての該当する条例、法律、規格の要件に加えて、設置および配線の手順に習熟している必要があります。

設置調整、運転の開始、使用、組立て、解体、保守を含む諸作業は、該当する実施規則に従って訓練を受けた適切な作業員が実行する必要があります。

本機器が製造メーカーにより指定されていない方法で使用されている場合、機器により提供されている保護が損なわれる恐れがあります。

ACHTUNG: Lesen Sie dieses Dokument und die im Abschnitt „Weitere Informationen“ aufgeführten Dokumente, die Informationen zu Installation, Konfiguration und Bedienung dieses Produkts enthalten, bevor Sie dieses Produkt installieren, konfigurieren, bedienen oder warten. Anwender müssen sich neben den Bestimmungen aller anwendbaren Vorschriften, Gesetze und Normen zusätzlich mit den Installations- und Verdrahtungsanweisungen vertraut machen.

Arbeiten im Rahmen der Installation, Anpassung, Inbetriebnahme, Verwendung, Montage, Demontage oder Instandhaltung dürfen nur durch ausreichend geschulte Mitarbeiter und in Übereinstimmung mit den anwendbaren Ausführungsvorschriften vorgenommen werden.

Wenn das Gerät in einer Weise verwendet wird, die vom Hersteller nicht vorgesehen ist, kann die Schutzfunktion beeinträchtigt sein.

ATTENTION : Lisez ce document et les documents listés dans la section Ressources complémentaires relatifs à l'installation, la configuration et le fonctionnement de cet équipement avant d'installer, configurer, utiliser ou entretenir ce produit. Les utilisateurs doivent se familiariser avec les instructions d'installation et de câblage en plus des exigences relatives aux codes, lois et normes en vigueur. Les activités relatives à l'installation, le réglage, la mise en service, l'utilisation, l'assemblage, le démontage et l'entretien doivent être réalisées par des personnes formées selon le code de pratique en vigueur.

Si cet équipement est utilisé d'une façon qui n'a pas été définie par le fabricant, la protection fournie par l'équipement peut être compromise.

주의：본 제품 설치, 설정, 작동 또는 유지 보수하기 전에 본 문서를 포함하여 설치, 설정 및 작동에 관한 참고 자료 섹션의 문서들을 반드시 읽고 숙지하십시오. 사용자는 모든 관련 규정, 법규 및 표준에서 요구하는 사항에 대해 반드시 설치 및 배선 지침을 숙지해야 합니다.

설치, 조정, 가동, 사용, 조립, 분해, 유지보수 등 모든 작업은 관련 규정에 따라 적절한 교육을 받은 사용자를 통해서만 수행해야 합니다.

본 장비를 제조사가 명시하지 않은 방법으로 사용하면 장비의 보호 기능이 손상될 수 있습니다.

ATTENZIONE Prima di installare, configurare ed utilizzare il prodotto, o effettuare interventi di manutenzione su di esso, leggere il presente documento ed i documenti elencati nella sezione "Altre risorse", riguardanti l'installazione, la configurazione ed il funzionamento dell'apparecchiatura. Gli utenti devono leggere e comprendere le istruzioni di installazione e cablaggio, oltre ai requisiti previsti dalle leggi, codici e standard applicabili.

Le attività come installazione, regolazioni, utilizzo, assemblaggio, disassemblaggio e manutenzione devono essere svolte da personale adeguatamente addestrato, nel rispetto delle procedure previste. Qualora l'apparecchio venga utilizzato con modalità diverse da quanto previsto dal produttore, la sua funzione di protezione potrebbe venire compromessa.

DİKKAT: Bu ürünün kurulumu, yapılandırılması, işletilmesi veya bakımı öncesinde bu dokümanı ve bu ekipmanın kurulumu, yapılandırılması ve işletimi ile ilgili İlgiye Kaynaklar bölümünde yer listelenmiş dokümanları okuyun. Kullanıcılar yürürlükteki tüm yönetmelikler, yasalar ve standartların gereksinimlerine ek olarak kurulum ve kablolama talimatlarını da öğrenmek zorundadır.

Kurulum, ayarlama, hizmete alma, kullanma, parçaları birleştirme, parçaları sökme ve bakım gibi aktiviteler sadece uygun eğitimleri almış kişiler tarafından yürürlükteki uygulama yönetmeliklerine uygun şekilde yapılabilir.

Bu ekipman üretici tarafından belirlenmiş amacın dışında kullanılırsa, ekipman tarafından sağlanan koruma bozulabilir.

注意事項：在安装、設定、操作或維護本產品前，請先閱讀此文件以及列於「其他資源」章節中有關安裝、設定與操作此設備的文件。使用者必須熟悉安裝和配線指示，並符合所有法規、法律和標準要求。

包括安裝、調整、交付使用、使用、組裝、拆卸和維護等動作都必須交由已經適當訓練的人員進行，以符合適用的實作法規。

如果將設備用於非製造商指定的用途時，可能會造成設備所提供的保護功能受損。

POZOR: Než začnete instalovat, konfigurovat či provozovat tento výrobek nebo provádět jeho údržbu, přečtěte si tento dokument a dokumenty uvedené v části Dodatečné zdroje ohledně instalace, konfigurace a provozu tohoto zařízení. Uživatelé se musejí vedle požadavků všech relevantních vyhlášek, zákonů a norem nutně seznámit také s pokyny pro instalaci a elektrické zapojení.

Činnosti zahrnující instalaci, nastavení, uvedení do provozu, užívání, montáž, demontáž a údržbu musí vykonávat vhodně proškolený personál v souladu s příslušnými prováděcími předpisy.

Pokud se toto zařízení používá způsobem neodpovídajícím specifikaci výrobce, může být narušena ochrana, kterou toto zařízení poskytuje.

UWAGA: Przed instalacją, konfiguracją, użytkowaniem lub konserwacją tego produktu należy przeczytać niniejszy dokument oraz wszystkie dokumenty wymienione w sekcji Dodatkowe źródła omawiające instalację, konfigurację i procedury użytkowania tego urządzenia. Użytkownicy mają obowiązek zapoznać się z instrukcjami dotyczącymi instalacji oraz oprzewodowania, jak również z obowiązującymi kodeksami, prawem i normami.

Działania obejmujące instalację, regulację, przekazanie do użytkowania, użytkowanie, montaż, demontaż oraz konserwację muszą być wykonywane przez odpowiednio przeszkolony personel zgodnie z obowiązującym kodeksem postępowania.

Jeśli urządzenie jest użytkowane w sposób inny niż określony przez producenta, zabezpieczenie zapewniane przez urządzenie może zostać ograniczone.

OBSE! Läs detta dokument samt dokumentet, som står listat i avsnittet Övriga resurser, om installation, konfigurering och drift av denna utrustning innan du installerar, konfigurerar eller börjar använda eller utföra underhållsarbete på produkten. Användare måste bekanta sig med instruktioner för installation och kabeldragning, förutom krav enligt gällande koder, lagar och standarder.

Åtgärder som installation, justering, service, användning, montering, demontering och underhållsarbete måste utföras av personal med lämplig utbildning enligt lämpligt bruk.

Om denna utrustning används på ett sätt som inte anges av tillverkaren kan det hända att utrustningens skyddsanordningar försätts ur funktion.

LET OP: Lees dit document en de documenten die genoemd worden in de paragraaf Aanvullende informatie over de installatie, configuratie en bediening van deze apparatuur voordat u dit product installeert, configureert, bedient of onderhoudt. Gebruikers moeten zich vertrouwd maken met de installatie en de bedringsinstructies, naast de vereisten van alle toepasselijke regels, wetten en normen.

Activiteiten zoals het installeren, afstellen, in gebruik stellen, gebruiken, monteren, demonteren en het uitvoeren van onderhoud mogen uitsluitend worden uitgevoerd door hiervoor opgeleid personeel en in overeenstemming met de geldende praktijkregels.

Indien de apparatuur wordt gebruikt op een wijze die niet is gespecificeerd door de fabrikant, dan bestaat het gevaar dat de beveiliging van de apparatuur niet goed werkt.

Retrieve and Deploy the FactoryTalk Analytics LogixAI File

Before you can install FactoryTalk Analytics LogixAI, you must get the container package.

1. Download the container package from the Product Compatibility and Download Center (PCDC) at rok.auto/pcdc. The download file is named *logixai-3.0_app.zip*. The zipped file Content includes the following:
 - *execute_and_run.sh*: The main script used for a first-time installation of the application.
 - *logixai-3.0_0_916.tar*: This file contains application files and all other dependent scripts and files that are required to run the application.
 - *app_startup.sh*: This script provides the option to start or stop or restart or to check the status of the application.
 - *app_startup_reboot.sh*: The script that takes care of restarting the application if a power-off/power-on occurs the server. The cron job that is configured during installation uses the script.
 - *readme.txt*
2. Move the content to the target Linux device.

Configure the ControlLogix Compute Module

IMPORTANT This **section only applies** if you are installing FactoryTalk Analytics LogixAI **on a ControlLogix Compute module**. If you aren't installing FactoryTalk LogixAI on a ControlLogix Compute module, skip this section and proceed to [Install FactoryTalk Analytics LogixAI](#).

Before you can install FactoryTalk Analytics LogixAI, you must configure the ControlLogix Compute module, as described in this section.

By default, the date on the ControlLogix Compute module is set to the old value. To set the date to the current date, you must synchronize the system clock across the network.

IMPORTANT A root user must execute this process.

1. Install the utility, and use the following commands to start it:
 - `apt install -y systemd-timesyncd`
 - `systemctl start systemd-timesyncd`
 - `timedatectl set-ntp true`
2. Use the following commands to install *sudo*:
 - `apt-get update`
 - `apt-get install sudo`
3. To enable ssh, execute the following commands. Access to the ssh and USB ports are disabled by default, and you must enable it.
 - Check ssh status via command `systemctl status ssh`
 - `systemctl enable ssh`
 - `systemctl start ssh`
4. To open the firewall for ssh, execute the following command:
 - `cp/etc/nftables.rules.ssh/etc/nftables.rules`

By default, the firewall, that is, nftables, is configured to block all Ethernet traffic to the module. The file */etc/nftables.rules* lists the default rules. A sample rules file that opens the ports for *ssh*, *icmp*, and *igmp* is provided at */etc/nftables.rules.ssh*.

5. Disable Linux Hibernation so the server doesn't go into sleep mode frequently.
6. Disable the configuration via the following command:
 - `systemctl mask sleep.target suspend.target hibernate.target hybrid-sleep.target`
7. Check the status via the following command:
 - `systemctl status sleep.target suspend.target hibernate.target hybrid-sleep.target`
8. To add a new user to the system and give the user sudo access, execute the following command:
 - `adduser <<username>> sudo`

9. To add the user to the user group that can communicate through the ControlLogix backplane, execute the following command:
 - `usermod -a -G ocxdevice <username>`
10. Restart the ControlLogix Compute module.
After the module resumes normal operation, you can complete the remaining steps remotely via an ssh session.
11. To grant the newly created user access to add cronjob in the system and add the user on a new line of the `cron.allow` file, complete the following steps.
 - a. Go to the `/etc` directory from the console.
 - b. Include the `Sudo nano cron.allow`.
 - c. Include the pertinent user name in the file.

```
sherlock@1756Comp:~$ cat cron.allow
cat: cron.allow: No such file or directory
sherlock@1756Comp:~$ cat /etc/cron.allow
root
sherlock
```

12. Change file permission so that you can access this file.

```
sherlock@1756Comp:/etc$ ls -la cron.allow
-rw-rw-rw- 1 root root 14 Jan 17 20:29 cron.allow
```

Install FactoryTalk Analytics LogixAI

To install FactoryTalk Analytics LogixAI on a ControlLogix Compute module, Edge computer, or virtual machine, complete the following steps.

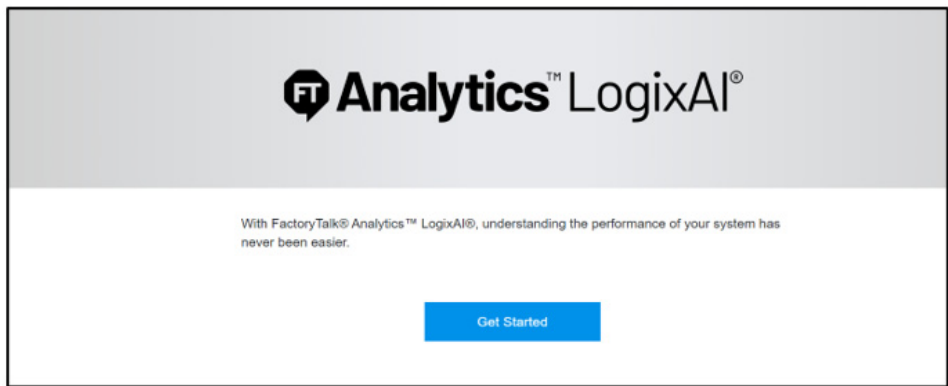
1. To modify the permissions to the installation scripts to enable execution, execute the following commands.


```
chmod 777 execute_and_run.sh
chmod 777 app_startup.sh
chmod 777 app_startup_reboot.sh
```
2. Execute the installation script.
 - The script is `./execute_and_run.sh`.
 - You must have sudo permission. To enable permissions, see [Troubleshoot the Application](#).
 - The script prompts you to enter your admin password for sudo permissions.

Once the script is successfully executed, you see the following:

```
Loading Application Container Images
Generating self signed certificate
Self signed certificate generation has been done successfully.
Setup completed successfully
```

3. To verify the application, open `https://<hostname>>` and the application initial Configuration pop-up window appears.



Restart Your Application

When necessary, you can use the script `App_startup.sh` shown to perform the following actions on your application:

- Start an application for the first time.
- Restart an application that has been stopped.
- Stop an application that is already running.
- Check the status of a running application

```
sherlock@logixai-lnx-605:~/logixai_app$ ./app_startup.sh
Usage: ./app_startup.sh start|stop|restart|status
```

Start the Application

To start the application for the first time or after it's been stopped, execute the following command:

- `./app_startup.sh start`

```
sherlock@logixai-lnx-605:~/logixai_app$ ./app_startup.sh start
Starting all the services
LogixAI application is started successfully
```

Stop the Application

To stop the application, execute the following command:

- `./app_startup.sh stop`

```
sherlock@logixai-lnx-605:~/logixai_app$ ./app_startup.sh stop
Stopping all the services
LogixAI application is stopped successfully
```

Check the Status of the Application

To check the status of the application, execute the following command:

- `./app_startup.sh status`

```
sherlock@logixai-lnx-605:~/logixai_app$ ./app_startup.sh status
LogixAI application is in running state
```

Troubleshoot the Application

This section describes troubleshooting your application.

Add a User to the Sudoers List

Complete the following steps to add a user to the sudoers list.

IMPORTANT A root user must execute this process.

1. To switch to the root user, complete the following steps.
 - a. Execute the following command:
 - `sudo su`
 - b. Enter the root password.
2. To add a user to sudoers, complete the following steps.
 - a. Execute the following command:
 - `sudo visudo`

The visudo commands makes sure that you don't make syntax errors that can lock you out of the system.

```

GNU nano 5.4 /etc/sudoers.tmp
#
# This file MUST be edited with the 'visudo' command as root.
#
# Please consider adding local content in /etc/sudoers.d/ instead of
# directly modifying this file.
#
# See the man page for details on how to write a sudoers file.
#
Defaults        env_reset
Defaults        mail_badpass
Defaults        secure_path="/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:
# Host alias specification
# User alias specification
# Cmnd alias specification
# User privilege specification
root    ALL=(ALL:ALL) ALL
    
```

- b. Use the down arrow key to scroll down to the line below `root ALL=(ALL:ALL) ALL`.
- c. Add `<username> ALL=(ALL) ALL`.

```

# User privilege specification
root    ALL=(ALL:ALL) ALL
exampleUser ALL=(ALL) ALL
    
```

- To exit, type *CTRL + Y*.
- To save, type the letter *Y*.

```
GNU nano 5.4 /etc/sudoers.tmp *
#
# This file MUST be edited with the 'visudo' command as root.
#
# Please consider adding local content in /etc/sudoers.d/ instead of
# directly modifying this file.
#
# See the man page for details on how to write a sudoers file.
#
Defaults      env_reset
Defaults      mail_badpass
Defaults      secure_path="/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin"

# Host alias specification

# User alias specification

# Cmnd alias specification

# User privilege specification
root    ALL=(ALL:ALL) ALL
exampleUser ALL=(ALL) ALL
# Allow members of group sudo to execute any command
sudo    ALL=(ALL:ALL) ALL

# See sudoers(5) for more information on "@include" directives:

@include_dir /etc/sudoers.d

^G Help      ^O Write Out  ^W Where Is  ^K Cut       ^T Execute   ^C Location  M-U Undo
^X Exit      ^R Read File ^N Replace   ^U Paste     ^J Justify   ^_ Go To Line  M-E Redo
```

- To write to the *sudoers.tmp* file, hit Enter again.

Installation Script Details

The following describes the steps that script `execute_and_run.sh` performs during installation:

- **apt-get update:** Used to update the package index files on the system. The package index files contain information about available packages and their versions.
- **Install tar:** The tar package is installed to untar the application files.
- **Install podman:** Podman is the containerization tool the LogixAI application uses. It loads container images and runs the containers.
- **Setting of Unprivileged port:** By default, Linux processes can't listen to any ports below 1024. For the LogixAI application to run on port 443, the command `sudo sysctl net.ipv4.ip_unprivileged_port_start=80` is in the script.
- **Setting of Ping Group Range:** By default, Linux doesn't support a device pinging other devices that are available in the network. Because the LogixAI application uses ping functionality to delete the controllers that are available in the network, ping support is required. The command `sudo sysctl net.ipv4.ping_group_range=0 2147483647` enables ping support.
- **User Linger:** When the system reboots, the application should start on its own. To start the application on its own, the user process must run without any open session; lingering does that. The command `sudo loginctl enable-linger 1000` enables lingering.
- **Compute -> Start Time sync service:** On a ControlLogix Compute module, the system timesyncd service is started to synchronize the system clock with the network. The command `sudo systemctl start systemd-timesyncd` starts the system time sync service.
- **Compute -> Enable NTP service:** Network Time Protocol (NTP) is a networking protocol that synchronizes time over a network. Network time synchronization is required on the ControlLogix Compute module to make sure that the module has the correct time. The command `sudo timedatectl set-ntp true` synchronizes time over the network, including the ControlLogix Compute module.
- **Compute -> Enable Port 443:** The LogixAI application runs on port 443. To access this application on port 443, the command `sudo nft add rule inet firewall inbound tcp dport 443 accept` enables port 443.
- **Compute -> Enable Port 22:** You must enable Port 22 in the firewall rules. The command is `sudo nft add rule inet firewall inbound tcp dport 22 accept`.
- **Copying Firewall file:** When the server reboots, the following commands make sure that nftables settings are maintained:
 - `sudo nft list ruleset > nftables.rules`
 - `sudo mv nftables.rules /etc/nftables.rules`
- **Compute -> Mount of tmp directories:** Due to limited memory available on the ControlLogix Compute module, during installation, tmp directories are mounted with additional spaces because container images use tmp directory for loading the images. The following commands mount directories:
 - `sudo mount -o remount,size=1G /var/tmp`
 - `sudo mount -o remount,size=1G /tmp`
- **Adding Local Configuration:** To keep the settings intact after server restart, a `local.conf` file is created under the `/etc/sysctl.d` directory. The file includes the following commands.
 - `net.ipv4.ping_group_range=0 2147483647`
 - `net.ipv4.ip_unprivileged_port_start=80`
- **Adding Cronjob:** Cronjob is added in the system to make sure that an application starts successfully when a server is rebooted. Cronjob uses the command `app_startup_reboot.sh` script to start the application. The following graphic shows how the cronjob looks after the installation is complete.

```

sherlock@logixai-lnx-605:~/logixai_app$ crontab -l
# Edit this file to introduce tasks to be run by cron.
#
# Each task to run has to be defined through a single line
# indicating with different fields when the task will be run
# and what command to run for the task
#
# To define the time you can provide concrete values for
# minute (m), hour (h), day of month (dom), month (mon),
# and day of week (dow) or use '*' in these fields (for 'any').
#
# Notice that tasks will be started based on the cron's system
# daemon's notion of time and timezones.
#
# Output of the crontab jobs (including errors) is sent through
# email to the user the crontab file belongs to (unless redirected).
#
# For example, you can run a backup of all your user accounts
# at 5 a.m every week with:
# 0 5 * * 1 tar -zcf /var/backups/home.tgz /home/
#
# For more information see the manual pages of crontab(5) and cron(8)
#
# m h dom mon dow  command
@reboot /home/sherlock/logixai_app/app_startup_reboot.sh

```


- **Making the required directories:** The following directories are created under the user who is running the installation's HOME directory:
 - `$HOME/container/datastore`: This folder stores the Dump file of the Database. It's used during server restart to return the application to the previous state.
 - `$HOME/container/logs`: This folder stores log files that the application generates. You can use the log files to debug potential application issues.

Directory permissions are changed so that you can access the following directories:

- `podman unshare chown 1001 -R $HOME/container/datastore`
- `podman unshare chown 1001 -R $HOME/container/logs`
- **Self Signed certificate:** To run the application on https, a self-signed certificate is required. OpenSSL generates a certificate and private key file that is provided to the application.
- **Loading and Running the Container:** The command `Podman "load"` loads the container images. The command `Podman-compose` starts the containers and the application.

Rockwell Automation Support

Use these resources to access support information.

Technical Support Center	Find help with how-to videos, FAQs, chat, user forums, Knowledgebase, and product notification updates.	rok.auto/support
Local Technical Support Phone Numbers	Locate the telephone number for your country.	rok.auto/phonesupport
Technical Documentation Center	Quickly access and download technical specifications, installation instructions, and user manuals.	rok.auto/techdocs
Literature Library	Find installation instructions, manuals, brochures, and technical data publications.	rok.auto/literature
Product Compatibility and Download Center (PCDC)	Download firmware, associated files (such as AOP, EDS, and DTM), and access product release notes.	rok.auto/pcdc

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Waste Electrical and Electronic Equipment (WEEE)



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Rockwell Otomasyon Ticaret A.Ş. Kar Plaza İş Merkezi E Blok Kat:6 34752 İçerenköy, İstanbul, Tel: +90 (216) 5698400 EEE Yönetmeliğine Uygundur

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AMERICAS: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000

EUROPE/MIDDLE EAST/AFRICA: Rockwell Automation NV, Pegasus Park, De Kleetlaan 12a, 1831 Diegem, Belgium, Tel: (32) 2663 0600

ASIA PACIFIC: Rockwell Automation SEA Pte Ltd, 2 Corporation Road, #04-05, Main Lobby, Corporation Place, Singapore 618494, Tel: (65) 6510 6608

UNITED KINGDOM: Rockwell Automation Ltd., Pitfield, Kiln Farm, Milton Keynes, MK11 3DR, United Kingdom, Tel: (44)(1908) 838-800

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