



System0n

Installation Guide

Version: 4 (2019-F)

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SystemOn Installation Guide

Installation Guide

Use this guide to install Shure SystemOn Audio Asset Management Software on a Windows server. After completing the installation, configure the software for your team to easily manage your audio network. See **Up and Running After Installation** for more details.

Contact the Shure Support Team

Shure System Support provides regional support teams with in-depth knowledge of Shure devices, digital audio networking, and best practices for your installation. If you encounter any issues during installation or setup of the software, contact Shure System Support for assistance. In the Americas region, you can call 312-736-6006 or visit www.shure.com to find your local support contact.

Software Releases

New versions of this software are periodically released to include new features and performance improvements. This documentation supports the latest version of the software. For more information on individual releases, see the [release notes](#) on www.shure.com.

System Requirements

Prerequisites

Supported Devices and Firmware

The following Shure devices and firmware versions are supported in SystemOn. Whenever possible, upgrade to the latest supported versions to take advantage of new features and system improvements.

Use the [Shure Update Utility](#) application to ensure your hardware meets these requirements.

System	Firmware Version
ANIUSB-MATRIX Audio Network Interface	3.1.x
MXA310 Table Array Microphone	3.1.x
MXA910 Ceiling Array Microphone	3.1.5-4.0.x
MXW Microflex® Wireless System	5.2.2-6.0.x
P300 IntelliMix® Audio Conferencing Processor	3.1.x
SBC220/240 Networked Charging Station	1.1.43-1.1.x

System	Firmware Version
SBC250/450/850 Networked Charging Station	2.2.24–2.3.x
SCM820 Digital Intellimix[®] Automatic Mixer	1.3.x
ULX-D[®] Digital Wireless System	2.2.24–2.3.x

Internet Access

- During software installation (may be required for application updates)
- To send SMS text message notifications in SystemOn

Required Ports

Server Inbound Ports HTTP and Web Sockets	80 (default)
Mongo database server Web API Inventory Server (Device API)	Three ports, dynamically allocated at install using available ports in the range of 10000-65535.

Install Windows Updates

Make sure your operating system is up-to-date before software installation.

Recommendations

Back Up the MongoDB Database	By default, your system creates daily backups of the MongoDB database. See the Backup and Restore Mongo Database for more information.
Integrate SMTP server with SystemOn	After installing the software, connect SystemOn to your SMTP server from the Integrations page. SMTP is required to recover usernames and reset passwords, including the password for the built-in admin account.

Operating System

The follow operating systems are supported on a physical or virtual machine:

- Windows Server 2019 (recommended)
- Windows Server 2016
- Windows Server 2012 R2
- Windows 10 (Professional or Enterprise), 64-bit edition

Web Browser

The following are the minimum versions supported on browsers:

- Chrome 72
- Safari: 12

- Windows Edge 44

Hardware

System memory	3 GB of RAM available
Hard-disk space	2 GB available
Processor	Dual-core minimum

Automatic Configuration Updates

The following settings are automatically made during software installation.

Installer Prerequisites

The following prerequisites are automatically added during the installation process:

- PowerShell Community Extensions 3.1
- Microsoft .NET Framework 4.6.2
- Microsoft Visual C++ 2013 Redistributable Package (x86)
- Microsoft Windows Management Framework 4.0
- MongoDB v3.2.0

Windows Firewall

LocalPort	5568, 8427
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IIS

Application pool settings

- .NET CLR version v4.0
- 32-Bit Applications enabled

Miscellaneous

- IIS service is enabled
- IIS_IUSRS group allowed read/write access to the application directory
- A site name called "CWB" is created
- "CWB" site runs with full .NET trust level

Multi-Subnet Networks

To set up Shure SystemOn to operate across subnets, follow these prerequisites:

Prerequisites

- Valid IP route to all subnets with devices
- Allow ports UDP ports 5568 and 8427
- ACN devices are routable from server default gateway

Communication Requirements

The following is required for communication between the server and Shure devices.

Network

- Unicast traffic capable
- Server machine requires IP route to all subnets with supported Shure devices

Shure Devices

ACN Multicast

- Port: 5568
- UDP Multicast
- TTL is currently 20 for Windows

Shure Supplemental Discovery

- IP address: 239.255.254.235
- Port: 8427
- UDP Multicast
- TTL is 64

Backup and Restore the Database

Protect against data loss by backing up the MongoDB database (installed with SystemOn) that stores your Shure software information. Backups are also useful when migrating to a new server.

Backups store all projects, locations, and device settings that your team makes in the software. For backup restoration, only those backup files (`.bak`) that match the current operating software version are supported.

Backup the Mongo Database

Use the machine installed with the software to create the MongoDB backup.

1. Identify a location to archive the database backup. You use this path in the command line.
2. Begin to open a command prompt by opening the Start menu and start typing "command". Do not press Enter.
3. Right-click the command prompt item and select *Run as administrator*.
4. Type the following command line (including quotation marks for file paths) after replacing the placeholders marked by `[]`:

```
"[location of SystemOn Software install directory]\Services\MongoDb-3.2.0\Bin\mongodump.exe" --host localhost --port [number chosen at install] --gzip --archive="[path and file name of backup]"
```

Tip: Sample command line with default settings:

```
"c:\Program Files\Shure\Shure Networked Systems Software\Services\MongoDb-3.2.0\Bin\mongodump.exe" --host localhost
--port 30000 --gzip --archive="c:\Shure.bak"
```

5. Press Enter. The file is archived at the path specified in the prompt.

Restore a Database Backup

1. On the machine installed with the software, open a command prompt by opening the Start menu and start typing "command". Do not press Enter.
2. Right-click the command prompt item and select *Run as administrator*.
3. Type the following command line (including quotation marks for file paths) after replacing the placeholders marked by []:

```
"[location of SystemOn Software install directory]\Services\MongoDb-3.2.0\Bin\mongorestore.exe" --host localhost
--port [number chosen at install] --drop --gzip --archive="[path and file name of backup]"
```

Tip: Sample command line with default settings:

```
"c:\Program Files\Shure\Shure Networked Systems Software\Services\MongoDb-3.2.0\Bin\mongorestore.exe" --host localhost
--port 30000 --drop --gzip --archive="c:\Shure.bak"
```

4. Press Enter.
5. Reload the database configuration by typing

```
iisreset
```

at the command prompt.

Up and Running After Installation

The following configurations are optional, but they add functionality to SystemOn and make it easier for the A/V support team to effectively manage their Shure devices. Some of these settings may require information from your network administrator.

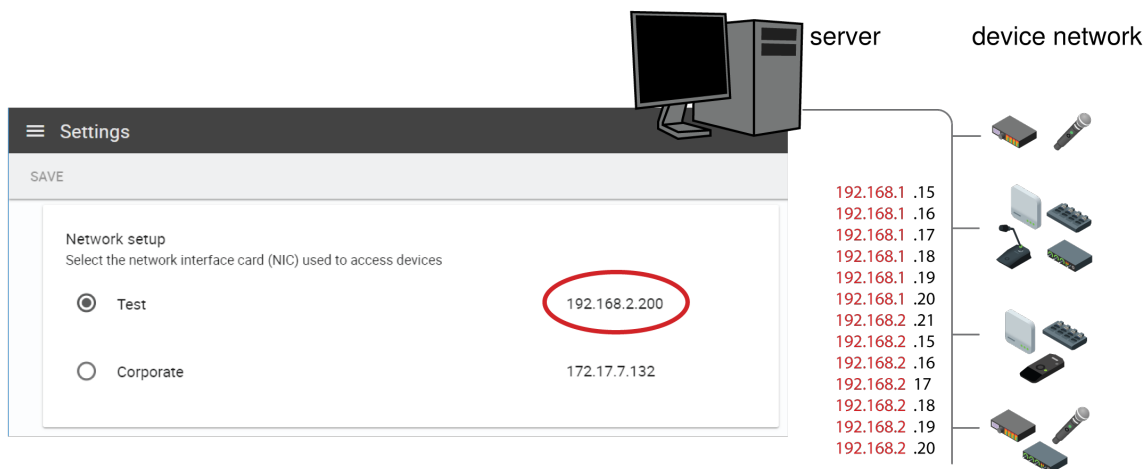
Configuration Checklist

Have these items ready to streamline the setup process and get your team up and running in SystemOn:

1. Activation ID from your license purchase or trial. After applying your plan in the software, you'll need to assign a license to each network device to access all SystemOn features for that device.
2. Supported firmware versions on your Shure devices. See System Requirements for details.
3. A list of IP addresses for all devices on separate subnets.
4. Information to set up users and notifications:
 1. LDAP server
 2. SMTP
 3. Twilio account for SMS text messaging

Connecting to the Device Network

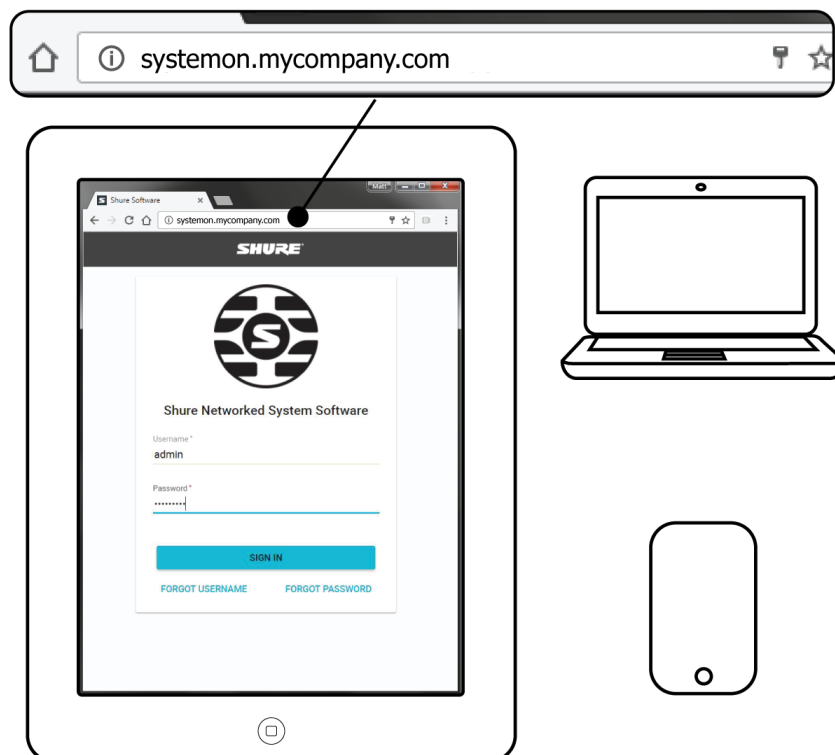
Connect the SystemOn server to your audio network by selecting the correct network interface card (NIC). If more than one NIC is available on your machine, choose the card with an IP address in the same range as your devices.



Select the NIC

Setting up a URL for your Site

You can set up a base URL to access your SystemOn site from a familiar name, like <http://systemon.mycompany.com>. This is the address your team will use to access SystemOn software.



Access SystemOn using a browser

Set up a DNS alias on your DNS controller to access your SystemOn site from a canonical URL. For example, if you create a DNS alias of *SystemOn*, you will be able to access this software from: <http://systemon.mycompany.com> or <http://systemon>.

Import Users from your LDAP Directory

Add accounts from your user directory by integrating with your LDAP (Lightweight Directory Access Protocol) database. LDAP integration reduces set up time by importing existing users and simplifies your team's workflow by using the same sign in credentials.

1. Go to *Settings > Integrations*.
2. In the LDAP section, click *Enable*.
3. Fill out the required fields according to your LDAP server settings.
4. Select Test connection to verify the integration is successful.
5. Click *Enable*.

LDAP Passwords

For users imported from LDAP, passwords are maintained by the LDAP database and referenced by SystemOn during sign in. To avoid a conflict with the database, these users cannot reset their passwords through SystemOn.

Connecting to the SMTP Server

Set up automatic emails to notify your team of important updates to their devices.

1. Go to *Settings > Integrations > Email*.
2. Enter your SMTP server settings.
3. Test the settings to ensure that the integration is successful.

Example:

From: AV-Alerts [mailto:AV-Alerts@mycompany.com]
Sent: Friday, December 16, 2018 10:29 AM
To: AV Tech
Subject: SystemOn - Device is missing - Channel 1

Hi Tech,
Device is missing:
Channel 1 (172.17.30.11) is missing.
Last seen at 12/16/2018 10:29:19 AM

MyCompany
www.myCompany.com

Set Up SMS Text Message Notifications

Set up automatic SMS text messaging to alert your team of important updates to their devices. Shure SystemOn uses your Twilio account to facilitate the messages.

Note: An internet connection is required on the server or computer installed with SystemOn

1. Create a Twilio account at <http://www.twilio.com>. Use information from your Twilio account to integrate with SystemOn:
 - Twilio account ID
 - Twilio Token
 - The "from" phone number for the Twilio account (if set up)
2. Go to *Settings > Integrations > SMS*.

3. Test the settings to ensure that the integration is successful. A message is sent to the phone number entered from the Twilio account.
4. Add phone numbers for each of your team members by editing their accounts at *Users*.