

## Smart Building Manager

### General Introduction Guide



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## Chapter 1. Introduction

Management of Smart Building devices involves monitoring, configuration and administration from a remote site. The Smart Building Manager (SBM) is a powerful software which assists the Building Management Administrator with these tasks.

With its enhanced SNMP based features SBM provides complete management access to all manageable Smart Building devices. All MICROSENS devices are automatically detected by the discovery feature.

This manual covers the introduction to the following SBM components:

- **Server Manager** of SBM (installed on a server operating system)
- **Web UI Client** of SBM (accessible via web browser with the SBM server instance running and the web server started)

For installation, configuration, and operation, please refer to the detailed SBM documentation on the MICROSENS website [www.microsens.com/support](http://www.microsens.com/support)



Please keep in mind that SBM is specialised to only work with MICROSENS devices. Devices of other manufacturers may not be detected by SBM.

## Chapter 2. Terms and Definitions

The table below alphabetically lists some terms used in this document and their definitions.

Term	Description
Actor	A Smart Building component that uses status values (or status value changes) reported by Smart Building sensors to control external attachments (e.g. blinds, thermostats, LED panels, door locks etc.).
Actor Group	Combines a group of actors that need to be set together (e.g. multiple LED panels). All grouped actors are combined using the same group attribute.
BIM	Building Information Model
Building Structure	The topology of the building like floors, rooms, etc.
Device	A Smart Building component that receives user inputs (e.g., a 4-button switch) and manages status value changes (e.g. receiving sensor values like temperature and sending the respective actor commands like blinds activation).
Group	The word "Group" is used to distinguish between separate units using the same building infrastructure independently (e.g. two companies using the same building, but different floors or rooms). Used within tab Smart Access Tree. Alternatively described as "Tenant".
SBM	Smart Building Manager. Refers to the software product.
Smart Office Device	Any network device used for smart buildings
Sensor	A Smart Building component used in detecting the status value changes within the defined thresholds (e.g. motion detection, temperature, brightness, humidity etc.). All grouped sensors are combined using the same group attribute.
Sensor Group	Combines a set of sensors whose status values should be analysed together (e.g. all motion detectors in a room).
SmartDirector	The MICROSENS SmartDirector is a MICROSENS switch with an additional software called "App". In order to turn a MICROSENS switch into a SmartDirector, the option "Smart Office" has to be enabled.
Tenant	The word "Tenant" is used to distinguish between groups using the same building infrastructure independently (e.g. two companies using the same building, but different floors or rooms). Used within the tab Smart Access Tree. Alternatively described as "Group".

## Chapter 3. SBM Components

SBM offers comprehensive tools for convenient and efficient Smart Building Network management.

The most basic installation scenario is as follows:

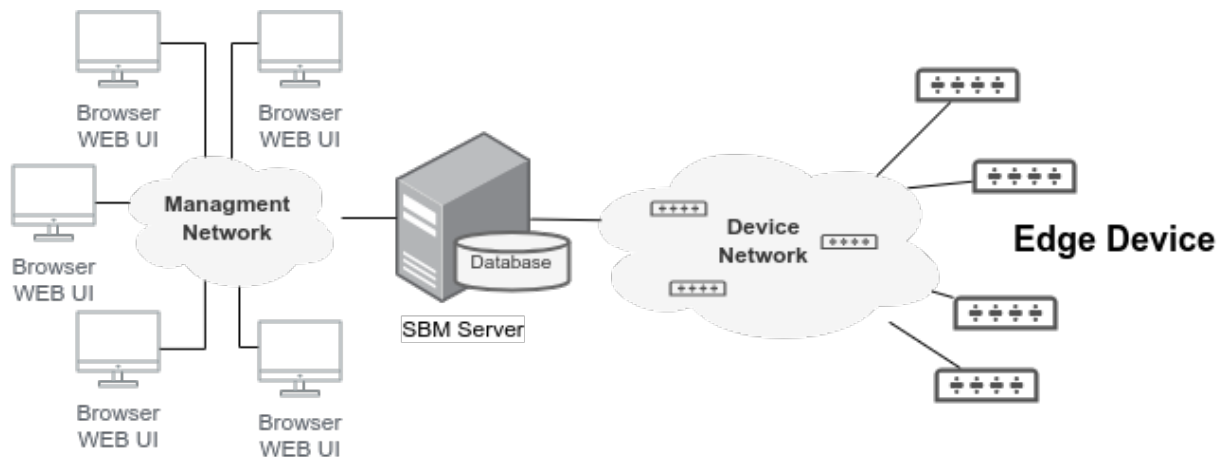


Figure 1. Basic Installation Scenario

The SBM components differ in their support for these tools as follows:

### Server Manager (sometimes referred to as "SBM Server")

The Server Manager of SBM operates on a dedicated server system that provides access from the client via a web interface. It manages a server process (or instance) which communicates with the network devices and the web client after being successfully started. Up to 30 parallel access requests can be managed. When the requirements increase, multiple server components can be operated redundantly in a network.

### Web Interface of Server Manager (referred to as "SBM Web UI")

The web interface allows access to the server through the use of a common web browser and provides functionalities for operational services.

-  | The web server of the server instance has to be running.

## 3.1. SBM and Network Management

### Network Administration

SBM implements a discovery operation that automatically detects all manageable MICROSENS SmartDirector devices in the network (SNMP Discovery, MAC Discovery, IP Based Discovery). This configuration can be stored in a database (SBM Server) and can be used in monitoring the network status.

### Network Monitoring

The current status of all active and manageable devices in the network can be retrieved automatically using the same device list file or the database entry used for network administration. The status is displayed using a graphical interface.

## **Network Configuration**

The hardware configuration of a manageable device, such as port configuration for traffic prioritisation, can be viewed and changed for individual devices or for all similar devices in the network simultaneously.

## Chapter 4. General Security Recommendations

In order to work safely with the application we strongly recommend the following actions before going operational:

### Passwords and Certificates

- Change all default passwords of application instances and pre-defined registered users.
- Change the default admin password of the managed devices. Refer to the respective device's user manual.
- Change the default database access password.
- Update the server certificate using a valid Root-CA.
- Update the devices certificates using a valid Root-CA.



- It is recommended to use a password management software to store all your changed passwords.
- It is recommended to use an identity management system to create and manage certificates for your server and devices.

### User Management

- Create alternative admin users with appropriate permissions for daily work.
- Create different users for the different roles.
- For security reasons, only create a minimum number of users which are absolutely necessary.
- Adjust the authorisation level for each user and always select a minimum number of access permissions.

### Firewall Settings

- Review necessary port numbers.
- Review necessary firewall settings.
- Adjust the port numbers of the server instance if needed.
- Take care of the dynamic port numbers as used by the server instance.
- Adjust firewall port settings for those ports which match the application's ports.

### Technic Tree

- For usability reasons keep the tree hierarchy as flat as possible (recommendation max. depth 2-3 levels)

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