CONCIERGE

Companion

Whitepaper

Overview and Hosting Considerations
4th Nov 2024

ABOUT THIS GUIDE

Thank you for purchasing Room Booking Display panels from Concierge Displays. This guide provides an overview of the Concierge Companion website.

What is Concierge Companion?

Concierge Companion is a useful addition to the Concierge room-booking displays solution. In addition to several convenient functions such as site-wide health monitoring, configuration consistency checks, and graphics (skins) package hosting, Companion also includes a powerful reporting engine.

Be confident your meeting rooms are always being used fairly and efficiently by picking a daily, weekly, monthly, quarterly or yearly report and compare:

- Occupancy and utilisation statistics by room and/or organiser.
- Ad-hoc booking statistics by room and/or organiser (meetings booked directly from the panel in-person).
- Unconfirmed booking statistics by room and/or organiser (meetings that were booked but were not confirmed in person, revealing room underutilisation).

All of this is augmented by Companion's ability to distribute clean & summarised failure reports when a panel or group of panels fails to check-in or a change in environment means incorrect or outdated room booking information may be on display and causing confusion.

Concierge Companion is provided free of charge for the first 12 months. Extended service can be purchased from a Concierge authorised reseller.

The Concierge Companion service includes (but is not limited to) the following functions:

1. **Panel check-ins and runtime reporting**
   Includes (but not limited to) IP addresses, MAC addresses, uptime, firmware and activity counters.

2. **Notification management (relay)**
   Simple summarised notification emails or via third-party hook (REST API provided)

3. **Panel check-in failure detection with notification relay**

4. **Clock-drift detection with notification relay**

5. **Room AV fault detection and notification relay**
   When end-users report faults

6. **Booking System connector failure detection and notification relay**

7. **General front-end failure detection and notification relay**

8. **One-click skin content uploads and hosting**

9. **Intelligent serving of skin content:**
   Simplifies panel config by serving different content to targeted panels. Includes:
   ● by group or
   ● by panel ID

10. **Access to latest firmware updates**
    Opt-in by design, these may include (but not limited to):
    ● new feature updates (official release channel)
    ● stability updates (official release channel)
    ● experimental features (beta release channel)
    ● security updates (official release channel)

11. **Live configuration consistency check sheet**
    Details include (but not limited to) major configuration details:
    ● On-display title
    ● Time-server
    ● Connector URL and username
    ● Skin URL
    ● Concierge Companion URL
    ● Confirmation mode (disabled, Finish Meetings, Delete Meetings)
    ● Firmware revision
    ● Last checked in
    ● Marked out-of-service

12. **Instant reports**

Includes, but not limited to:

1. Minimum Occupancy report (by panel, by organiser)
2. "BookNow" usage report (by panel, by organiser)
3. "BookFuture" usage report (by panel)
4. FinishNow usage report (by panel, by organiser)
5. Automatic release occurrence report (by panel, by organiser)
6. Extend usage report (by panel, by organiser)

Report periods include:

1. Daily (last 14)
2. Weekly (last 26)
3. Monthly (last 24)
4. Quarterly (last 8)
5. Yearly (last 10)

13. **General counter storage for custom reports**
In addition to built-in instant reports, all counters are stored for possible future custom reports. These counters include, but not limited to:
- admin site usage
- ungraceful shutdowns
- general network errors

14. **Dedicated physical dashboard in our Melbourne Support Center**
Includes, but not limited to, 24x7 proactive monitoring and response.

REGISTRATION

To register for a Companion Site, go to:
http://conciergedisplays.co/register

Or see **Self Hosting** section later in this guide.

CHECK-IN PAGE

Device Monitor

	Group	Label	Checked-in	Uptime	Clock Shift	IP address	Reflection URL	Firmware	Screenshot	Actions
>	BOT.B2.L4	BOT.B2.L4.CRG Range Review 2	4s 639ms ago	73d 23h	< 10s	172.18.20.42		1.2.1656-perpetual-iadea1		
>	BOT.B2.L4	BOT.B2.L4.Training Room 3	2m 6s ago	56d 21h	< 10s	172.18.20.105		1.2.1677-perpetual-iadea1		
>	BOT.B2.L4	BOT.B2.L4.CRG Camberwell	2m 8s ago	18h 20m	< 10s	172.18.20.34		1.2.1656-perpetual-iadea1		
>	BOT.B2.L4	BOT.B2.L4.CRG Malvern	2m 31s ago	8d 3h	< 10s	172.18.64.62		1.2.1656-perpetual-iadea1		
>	BOT.B2.L4	BOT.B2.L4.Training Room 1	4m 8s ago	73d 2h	< 10s	172.18.20.36		1.2.1656-perpetual-iadea1		
>	BOT.B2.L4	Prayer and Reflections Room	4m 48s ago	72d 14h	< 10s	172.18.2.210		1.2.1656-perpetual-iadea1		
>	BOT.B2.L4	BOT.B2.L4.CRG Geelong	8m 28s ago	22d 0h	< 10s	172.18.64.188		1.2.1656-perpetual-iadea1		
>	BOT.B2.L4	BOT.B2.L4.CRG Bourke Street	9m 13s ago	72d 2h	< 10s	172.18.20.39		1.2.1656-perpetual-iadea1		
>	BOT.B2.L4	BOT.B2.L4.CRG Brighton	9m 30s ago	62d 21h	< 10s	172.18.64.75		1.2.1656-perpetual-		

A green-bar indicates a panel has successfully checked into its Companion Site.

If a panel fails to check-in after 20 mins, a red bar is shown:

	Group	Label	Checked-in	Uptime	Clock Shift	IP address	Reflection URL	Firmware	Screenshot	Actions
>	BOT.B2.L1	BOT.B2.L1.DJ Booragoon	75d 0h ago	108d 13h	< 10s	172.18.20.28		1.2.1656-perpetual-iadea1		

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CHECK-IN PAGE (cont.)

When a panel checks in, the Companion site does some integrity checks including the following:

Asset faults: If a panel has an asset reported as a fault, the label will be displayed in red. Opening the panel will display detailed fault report information..

Time-shifting: Since clock times are intrinsic to a room-booking system, it's important synchronization is accurately verified. If any time-shift is detected relative to a master clock i.e. that of the Companion server, a warning is indicated.

SELF-HOSTING

Concierge Companion is a robust Java-based application designed to enhance the functionality and management of Concierge Displays panels. While the application is typically hosted and maintained by Concierge Displays in the cloud—which includes benefits like automatic version updates and regular data backups—there are scenarios where organisations may prefer to host the application on their internal IT infrastructure. This document outlines the requirements and considerations for self-hosting Concierge Companion.

Overview

Self-hosting Concierge Companion allows organisations to maintain full control over their deployment environment, customise configurations to meet specific needs, and comply with internal policies or regulatory requirements. This approach can be particularly advantageous for organisations with stringent security protocols, specific compliance mandates, or unique IT infrastructure setups.

Software Architecture

The application is built using a modular and scalable architecture to ensure reliability and performance:

- **Self-Contained Java 8 Application**: Concierge Companion is developed as a standalone Java application compatible with Java 8. This design choice ensures broad compatibility and reduces dependency issues.

- **MariaDB**: Utilized for storing user data, device configurations, and other essential operational data. MariaDB is a reliable, high-performance database system that ensures data integrity and quick access.

- **InfluxDB**: Used for time-series data management, InfluxDB efficiently handles logs, metrics, and real-time data analytics, providing valuable insights into system performance and usage patterns.

Hardware requirements

Microsoft Windows	Linux
Windows Server 2022 (minimum)	Ubuntu 20.04 LTS (minimum) Debian 11 (minimum)

Base Requirement: A minimum of *16 GB of RAM* is recommended to support the core operations of Concierge Companion and associated databases.

Scalability: For deployments involving a large number of panels, it's advisable to allocate additional memory. As a rule of thumb, *increase RAM by approximately 1 GB for every additional 100 panels.*This ensures the system can handle concurrent connections and data processing without performance degradation.

Processing Power and Storage

While specific CPU requirements may vary based on usage patterns, a modern multi-core processor is recommended to handle simultaneous processes efficiently.

For storage:
- Solid-State Drives (SSDs) are recommended for faster read/write operations, particularly beneficial for database performance.
- Ensure adequate storage capacity to accommodate data growth over time, especially for time-series data managed by InfluxDB.

Software requirements

Concierge Companion relies on Java 8 for its runtime environment. Organisations have two primary options for fulfilling this requirement:

Java Development Kit (JDK) 8

- **Version**: The latest update of JDK 8 is recommended (as of this writing, that's **8u432**).
- **Benefits**: Provides tools for both development and runtime, including compilers and debuggers.
- **Managed Installation**: Offers regular updates and security patches through official Java distribution channels, ensuring the runtime environment remains secure and up-to-date.

Java Server Java Runtime Environment (Server JRE) 8

- **Characteristics**: A subset of the JDK designed specifically for server environments.
- **Advantages**:
    - **Portable**: Can be run without formal installation, making it suitable for environments where software installations are restricted.
    - **Install-less**: Reduces the footprint on the host system and avoids conflicts with other Java installations.
    - **Unmanaged Installation Method**: Places the onus on the organisation to manage updates and security patches, offering greater control over the environment.

Organisations should choose the option that best aligns with their IT policies and management preferences.

Proper network configuration is crucial for the seamless operation of Concierge Companion in a self-hosted environment:

Internet Connectivity

- **Not Required**: The self-hosted server does **not** need an internet connection to operate. This can enhance security by reducing exposure to external threats.
- **Internal Access**: All necessary communications occur within the internal network (LAN).

Device Connectivity

- **VLANs and Subnets**: Concierge Displays panels can be located on different VLANs or IP subnets from the server.
- **Accessibility**: Panels must have network access to the server using either its DNS name or IP address.
- **Network Ports**:
    - **HTTP Port 80**: Standard port for unencrypted web traffic.
    - **HTTPS Port 443**: Recommended for encrypted communications, enhancing security.
- **Firewall Configuration**: Ensure that the necessary ports are open and that firewalls or network security appliances do not block required traffic between the panels and the server.

DNS and IP Addressing

- **Consistent Addressing**: Use static IP addresses or properly configured DHCP reservations for the server to ensure consistent accessibility.
- **DNS Entries**: If using DNS names, ensure they are correctly configured and resolvable by client devices within the network.

Installation and Configuration

Installation and configuration are critical steps that ensure the application runs correctly and efficiently. Concierge Displays offers remote assistance to streamline this process:

Remote Installation by Concierge Displays Technicians

- **Expert Support**: Certified technicians will perform the installation, ensuring all components are correctly set up according to best practices.
- **Customised Configuration**: Technicians can tailor the configuration to meet the specific needs of your organisation's environment.
- **Scheduling**: Installation can be arranged at a convenient time to minimise disruption to operations.

Pre-Installation Checklist

Before installation, organisations should:

- **Verify Hardware and Software Requirements**: Ensure that all the prerequisites outlined above are met.
- **Prepare Network Settings**: Configure network settings, including IP addresses and port forwarding if necessary.
- **Coordinate with IT Personnel**: Have IT staff available to assist with firewall configurations, user permissions, and any required access controls.

Post-Installation Support

- **Training**: Technicians can provide basic training on system operation and maintenance.
- **Documentation**: Receive documentation on system configurations, backup procedures, and troubleshooting tips.
- **Ongoing Assistance**: Concierge Displays offers support services should any issues arise after installation.

Security Considerations

Self-hosting places the responsibility of security on the organisation. Key considerations include:

- **Regular Updates**: Keep Java and database software updated to patch security vulnerabilities.
- **Access Controls**: Implement strong user authentication and authorization measures for accessing the server and application.
- **Data Backups**: Establish regular backup routines for both MariaDB and InfluxDB to prevent data loss.
- **Network Security**: Utilise firewalls, intrusion detection systems, and secure network protocols to safeguard against unauthorised access.

Benefits of Self-Hosting

- **Control**: Full control over the application environment, configurations, and data management.
- **Customisation**: Ability to customise settings and integrations to fit specific operational needs.
- **Compliance**: Enhanced ability to comply with internal policies, industry regulations, or legal requirements concerning data hosting and management.
- **Security**: Isolation from the internet reduces exposure to external threats, and on-premises hosting can align with stringent security practices.

Conclusion

Self-hosting Concierge Companion offers organisations the flexibility and control to manage their display panel systems effectively within their own IT infrastructure. By adhering to the specified hardware, software, and network requirements, and leveraging the expertise of Concierge Displays technicians during installation, organisations can achieve a secure, efficient, and customised deployment that aligns with their operational needs and policies.

For more information or to initiate the self-hosting process, please contact Concierge Displays to discuss your requirements and schedule an installation.