

Application Operation Manual for [ABC System]

Document Information

- **Version:** 1.0
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 - **Author:** [Your Name or Organization]
 - **Purpose:** This manual provides instructions for installing, configuring, operating, and maintaining the [Client-Server Application Name] application.
 - **Intended Audience:** System administrators, IT support staff, and end-users.
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1. Introduction

The [Client-Server Application Name] is a client-server application designed to [briefly describe the application's purpose, e.g., "manage customer data, facilitate secure communication, or provide real-time data processing"]. The server component handles [core server functions, e.g., data storage, processing, or authentication], while the client component provides a user interface for [core client functions, e.g., accessing data, submitting requests, or generating reports].

This manual covers the installation, configuration, operation, monitoring, and troubleshooting of the application to ensure smooth deployment and usage.

2. System Overview

The [Client-Server Application Name] operates in a client-server architecture:

- **Server:** Runs on a central server (physical or virtual) and manages [e.g., database operations, business logic, or API requests]. It handles multiple client connections and ensures data integrity and security.
- **Client:** Runs on end-user devices (e.g., Windows, macOS, or mobile devices) and communicates with the server to [e.g., retrieve data, submit user inputs, or display results].
- **Communication:** The client and server communicate over [e.g., TCP/IP, HTTP/HTTPS, or WebSocket] using [e.g., REST APIs, proprietary protocols, or database queries].

Key features include:

- [Feature 1, e.g., Secure user authentication]
 - [Feature 2, e.g., Real-time data synchronization]
 - [Feature 3, e.g., Role-based access control]
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3. System Requirements

Server Requirements

- **Operating System:** [e.g., Windows Server 2019/2022, Linux (Ubuntu 20.04 or later)]
- **CPU:** [e.g., 4-core CPU, 2.5 GHz or higher]
- **Memory:** [e.g., 8 GB RAM minimum, 16 GB recommended]
- **Storage:** [e.g., 100 GB free disk space for application and database]
- **Network:** [e.g., 1 Gbps Ethernet, static IP address]
- **Software Dependencies:**
 - [e.g., .NET Framework 4.8, Java Runtime Environment 11, or Node.js 16]
 - [e.g., Database: SQL Server 2019, MySQL 8.0, or PostgreSQL 13]
 - [e.g., Web server: IIS 10, Apache 2.4, or Nginx 1.18]
- **Ports:** [e.g., TCP 80 (HTTP), 443 (HTTPS), or 3306 (MySQL)]

Client Requirements

- **Operating System:** [e.g., Windows 10/11, macOS 12 or later, iOS 15+, Android 10+]
 - **CPU:** [e.g., 2-core CPU, 1.8 GHz or higher]
 - **Memory:** [e.g., 4 GB RAM minimum]
 - **Storage:** [e.g., 500 MB free disk space]
 - **Network:** [e.g., Stable internet connection, 10 Mbps or higher]
 - **Software Dependencies:**
 - [e.g., Web browser: Chrome 100+, Firefox 95+, or Edge 100+]
 - [e.g., Client application installer]
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4. Installation Instructions

4.1 Server Installation

1. Pre-Installation Checklist:

- Verify system requirements (see Section 3).
- Ensure the server has a static IP address and is accessible on required ports.
- Back up existing data and configurations.

2. Download the Server Installer:

- Obtain the server installation package from [e.g., vendor website, e.g., <https://example.com/downloads>].
- File: [ApplicationName]_Server_vX.X.X.zip.

3. Install Dependencies:

- Install [e.g., .NET Framework, Java, or database software] as per requirements.
- Configure the database (e.g., create a new database instance and user).

4. Install the Server Application:

- Extract the installer package to a temporary directory.
- Run [ApplicationName]_Server_Setup.exe (Windows) or [install_script.sh] (Linux).
- Follow the setup wizard:
 - Select installation directory (e.g., C:\Program Files\[ApplicationName]).
 - Configure database connection settings (e.g., server address, username, password).
 - Specify listening ports (e.g., 8080 for HTTP).
- Complete the installation and verify the server service is running.

5. Verify Installation:

- Open a terminal or command prompt and run [command, e.g., `netstat -an | find "8080"`] to confirm the server is listening.
- Access the server's admin interface (e.g., `http://[server-ip]:8080/admin`).

4.2 Client Installation

1. Pre-Installation Checklist:

- Verify client device meets requirements (see Section 3).
- Ensure network connectivity to the server.

2. Download the Client Installer:

- Obtain the client installation package from [e.g., vendor website or server's download portal].
- File: [ApplicationName]_Client_vX.X.X.exe Or .dmg.

3. Install the Client Application:

- Run the installer and follow the setup wizard.
- Specify the server address (e.g., `https://[server-ip]:8080`).
- Complete the installation.

4. Verify Installation:

- Launch the client application.
- Confirm connectivity to the server by logging in or accessing a test feature.

5. Configuration

5.1 Server Configuration

1. Configuration File:

- Location: [e.g., C:\Program Files\[ApplicationName]\config\server.config].
- Edit settings like:
 - DatabaseConnectionString: [e.g., `Server=localhost;Database=appdb;User=admin;Password=secure123`].

- Port: [e.g., 8080].
- LogLevel: [e.g., DEBUG, INFO, or ERROR].

2. Environment Variables:

- Set variables like [APP_HOME] or [API_KEY] if required.
- Example (Windows): `setx APP_HOME "C:\Program Files\[ApplicationName]"`.

3. Firewall and Network:

- Open required ports (e.g., 8080, 443) in the server's firewall.
- Configure SSL/TLS for secure communication (e.g., install a certificate).

4. Service Management:

- Ensure the server runs as a service (e.g., Windows Service or Linux systemd).
- Example (Linux): `sudo systemctl enable [application-name]` and `sudo systemctl start [application-name]`.

5.2 Client Configuration

1. Server Connection:

- Open the client application's settings menu.
- Enter the server address (e.g., `https://[server-ip]:8080`).
- Save and test the connection.

2. User Preferences:

- Configure user-specific settings (e.g., language, theme, or notifications).
- Save settings to the client configuration file (e.g., `%APPDATA%\[ApplicationName]\config.ini`).

6. Operation Instructions

6.1 Starting the Application

- **Server:**
 - Windows: Start the server service via `services.msc` or run `[ApplicationName]_Server.exe`.
 - Linux: Use `sudo systemctl start [application-name]`.
 - Verify the server is running by checking logs or accessing the admin interface.
- **Client:**
 - Launch the client application from the desktop shortcut or Start menu.
 - Ensure the device is connected to the network.

6.2 User Authentication

- Open the client application and enter credentials (username and password).
- If single sign-on (SSO) is enabled, authenticate via [e.g., OAuth or Active Directory].
- Contact the administrator if login issues occur.

6.3 Core Functionality

- **[Function 1, e.g., Data Entry]:**
 - Navigate to [e.g., Data > New Record].
 - Enter details and click Save.
- **[Function 2, e.g., Report Generation]:**
 - Select [e.g., Reports > Generate] and choose parameters.

- Export the report as [e.g., PDF or CSV].
- **[Function 3, e.g., Real-Time Monitoring]:**
 - View live data in the [e.g., Dashboard] tab.

6.4 Stopping the Application

- **Client:** Close the application via the Exit button or menu.
 - **Server:**
 - Windows: Stop the service via `services.msc` or run `[ApplicationName]_Server.exe /stop`.
 - Linux: Use `sudo systemctl stop [application-name]`.
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7. Monitoring and Maintenance

7.1 Monitoring Performance

- Use **Windows Performance Monitor** (Perfmon) to profile server performance:
 - Add counters like `Processor\% Processor Time`, `Memory\Available MBytes`, and `PhysicalDisk\% Disk Time`.
 - Monitor for high CPU usage (>80%) or low available memory (<10% of total).
- Use **Resource Monitor** for real-time server resource usage.
- Check client performance via [e.g., application logs or built-in diagnostics].

7.2 Logging and Diagnostics

- **Server Logs:**
 - Location: [e.g., `C:\Program Files\[ApplicationName]\logs\server.log`].
 - Review for errors or warnings.
- **Client Logs:**
 - Location: [e.g., `%APPDATA%\[ApplicationName]\logs\client.log`].
- Enable verbose logging in the configuration file for detailed diagnostics.

7.3 Backup and Recovery

- **Database Backup:**
 - Schedule daily backups using [e.g., SQL Server Management Studio or `mysqldump`].
 - Store backups in [e.g., `D:\Backups` or a cloud storage service].
- **Server Configuration Backup:**
 - Copy configuration files to a secure location.
- **Recovery:**
 - Restore the database from the latest backup.
 - Reinstall the server application and restore configuration files if needed.

7.4 Updates and Patching

- Check for updates at [e.g., `https://example.com/updates`].
 - Download and install patches following the vendor's instructions.
 - Test updates in a staging environment before applying to production.
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8. Troubleshooting

Issue	Symptoms	Resolution
Server not starting	Service fails to start; error in logs	Check configuration file for errors; verify ports are open; ensure dependencies are installed.
Client cannot connect	“Connection failed” error	Verify server address and port; check network connectivity; ensure server is running.
Slow performance	High CPU/memory usage	Use Perfmon to identify bottlenecks; terminate unnecessary processes; scale hardware if needed.
Authentication failure	“Invalid credentials” error	Reset user password; check SSO configuration; verify user account status.
Data not syncing	Stale or missing data	Check server logs for sync errors; ensure database is accessible; restart sync service.

- **Logs:** Always check server and client logs for detailed error messages.
- **Restart:** Restart the server or client to resolve transient issues.
- **Vendor Support:** Contact support if issues persist (see Section 9).

9. Support and Contact Information

- **Vendor Support:**
 - Website: [e.g., <https://example.com/support>]
 - Email: [e.g., support@example.com]
 - Phone: [e.g., +1-800-123-4567]
- **Documentation:** Available at [e.g., <https://example.com/docs>]
- **Community Forum:** [e.g., <https://forum.example.com>]
- **Hours:** [e.g., 9 AM–5 PM EST, Monday–Friday]

10. Appendix

10.1 Glossary

- **Client-Server:** An architecture where the client (user device) communicates with a central server to perform tasks.
- **Performance Counter:** A metric in Perfmon used to monitor system performance.
- **Data Collector Set:** A group of performance counters in Perfmon for logging data.

10.2 Configuration File Reference

- **Server Config** (`server.config`):

```
[Database]
ConnectionString=Server=localhost;Database=appdb;User=admin;Password=secure123
[Network]
Port=8080
[Logging]
LogLevel=INFO
```

- **Client Config** (config.ini):

```
[Server]
Address=https://[server-ip]:8080
[User]
Theme=Dark
```

Notes

- Replace placeholders (e.g., [ApplicationName], [server-ip]) with specific details for your application.
 - Regularly update this manual to reflect new versions or configuration changes.
 - Ensure all users have access to this manual and are trained on its contents.
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This draft provides a comprehensive template for a client-server application operation manual. If you provide specific details about the application (e.g., its name, purpose, technology stack, or specific features), I can customize the manual further. Additionally, if you need guidance on using tools like Windows Performance Monitor for profiling the application (as discussed previously), or if you want to focus on a specific section (e.g., troubleshooting or monitoring), let me know!