WALKair™ 1000

Upgrade Procedure

Version 9.0
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Scope

This Technical Note describes the software version upgrade from earlier versions of WALKair to 9.0, via WALKnet (WALKair management application).

General Introduction

This document describes the software version upgrade from earlier versions of WALKair to 9.0 via WALKnet (WALKair management application). As part of the software upgrade, the WALKnet application will be upgraded also to support the new WALKair version. This procedure is suitable for upgrades from any version starting 4.2 to version 9.0.
The download procedure is based on TFTP server, which is the Pumpkin application supplied with the WALKair version. By upgrading the WALKnet software (to version 6.30 and up), multiple SW download, feature is activated and the upgrade process becomes automated supporting multiple download of SW components as well as multiple number of BS BU's with their TS's; instructions for operating this feature are in this document.

From Version 4 and up, the WALKair system supports Frame Relay (FR) and from version 5 WALKair supports QBRI and Ethernet interfaces. These features are provided through a special Telecom Interface that includes its own memory and software. When upgrading a BU with an FR/Eth/QBRI Interface, a special file should be installed in the BU. The software upgrade process for the FR/Eth/QBRI Interface is identical to the regular software upgrade process except where it is specifically mentioned in this document.

WALKair Frame Relay delay was improved in version 9.0 almost down to the system's inherent delay. The delay reduction feature is not applicable to **FR – V35 2M** telecom cards (this telecom card interface has a limitation of 2 Mbps only and is no longer available).

In cases where there is one or more **FR – V35 2M** telecom cards in the BS or in one of the TSs in the cell, it is not possible to use the Frame Relay Delay Reduction feature.

In order to ensure compatibility with the existing install base that could also comprise some pre-version 9.0 units, WALKair 1000 version 9.0 is released with two FR components:

- FRDR_0902.s19 that supports Delay Reduction. This firmware is used with WALKair version 9.0 units/interfaces offering support for the Frame Relay Reduced Delay feature.
- FR_0902.s19 that does not support Delay Reduction. This firmware is used with WALKair pre-version 9.0 units that do not offer support for the Frame Relay Reduced Delay feature.

The Frame Relay firmware module (FRDR_0902.s19), which introduces the advantages of reduced IP delay, is an extension to the upgrade package of version 9.0. The upgrade package contains the FR_0902.s19 file, which is compatible with ALL hardware revisions of the WALKair 1000 modules, and also the FRDR_0902.s19 file, which supports all the Frame Relay modules except for the **FR – V35 2M** telecom card.

Upgrade Process

The download procedure for WALKair using the TFTP server and air link consists of the following steps:

- New WALKnet version installation.
- TFTP server configuration.
- Downloading the WALKair software to the Terminal standby image.
- Loading the WALKair software to the Base Standby image.
- Verifying the proper WALKair software download.
- Performing the switchover:
  - First, to all of the Terminals.
  - Second, to the Base.

NOTE

The software upgrade process for the FR/QBRI/Eth interface is identical to the above procedure.

NOTE

Before upgrading FR modules to a delay reduction version (FRDR_0902.s19), the user must ensure there are no FR-V35 2M his network, which don't support the new delay reduction firmware. Incase such module exist in the upgraded sector, the Frame Relay service on this unit will not work.

WALKnet Installation

System Compatibility

The WALKnet 9.0 application can be installed under Windows NT/2000/XP or Unix SUN Solaris (2.6 and up) Operating Systems (WALKnet version 9.0 for UnixSUN Sloaris is not released with the WALKair 9.0 release. This version will be released separately)
It also capable of working in 2 modes:

Under HP Open View – NNM (Network Node Manager) platform version 6.1 and up.

As a standalone application.

NOTE

Management workstation characteristics should be complied with the requirements shown in the WALKnet User Manual.

WALKnet Upgrade Procedure

CAUTION

Since in WALKnet 9.0 the internal database structure has changed, it is extremely important to save all the maps after opening them for the first time with the new version of WALKnet 9.0, to avoid performance degradation when using an unsaved old map.

Before proceeding with the WALKnet installation there are some prior actions needed to be taken:

The Procedure

- If WALKnet and Oracle are not currently installed in the workstation, the order of installation should be: First Oracle, then the ODBC driver, then HPOV NNM and finally WALKnet version 9.0. After that, oracle8.sql should be executed.
- If you have an HP-open view application make sure it is updated with the newer versions (6.10 + patch 0626 / 6.20). The patch is supplied in the WALKnet CD.
- Install WALKnet version 9.0 in the same path where the current version is installed (if there is one). Follow the installation procedure described in the WALKnet User Manual.
- For more detail regarding WALKnet installation, please refer to “WALKnet_9_0_Upgrade_procedure.

Validation Steps

For WALKnet Standalone

- Initialize the WALKnet application.

  Login the application using the ADMIN profile.

- Open the regional area map.

  Check connectivity to several (more than 3) different BS-BU in different sites on the map.

  Assure management capability by changing a telecom card admin status.

For WALKnet with HP-Open View

- Start the HP-OV NNM program
- Check Bs-Bu icons appear as WALKair icon.
- Start the WALKnet application from the HP-OV menu bar.
- Open the BS-BU view window from the BS-BU icon actions.
- Check trap reception from a BS-BU.

WALKair Installation

The WALKair software is provided to the customer on a CD.

The WALKair CD for software version 9.0 contains the following:

- WALKair software version 9.0.
- Version 9.0 Manuals (including this software upgrade procedure).
- Version 9.0 Release Notes.
- WALKnet 9.0 for Windows NT/2000/XP and Unix Operating Systems.
- TFTP server application – Pumpkin.

Upgrade Setup

This section defines the Setup tools and configuration options for upgrading the WALKair software.

Software Setup Tools

The following items are required for the software upgrade:

- Pumpkin software.
- WALKnet Version 9.0.

IP Connection Setup Options

You can set up the IP connection for the software upgrade using any of the following options:

- Connect your PC via HUB to the BS-BU using an Ethernet cable.
- Connect your PC directly to the BS-BU using a crossed cable.
- Connect your PC and BS-BU to your LAN network (DCN).

Upgrade Process

The Upgrade process is divided into 2 phases:

- Downloading the files to the Backup memory – The downloading Process can be submitted to a several units using the Parallel S.W Download tool.
  This phase will be running in the background during the day, while the WALKair services operates normally.

  There are some limitations, such as Network bandwidth and TFTP server resources that should be consider.

- Switching the current old version to the new version – After assuring all units have passed the downloading phase, by looking into each unit version window, the switchover process can begin. Be aware of the fact that every switchover is followed by a hard reset, means that the service will go down until the units will initialize the new software.
  The switchover will be commanded first on the Terminal and after the link drops the Base units will be commanded to make the switchover.

Software Download Process

Multiple SW Download

WALKnet version 9.0 can automatically download the SW to a few units at the same time. To activate this feature follow the next instructions:

- Open Pumpkin: Click “Options”, under “Read Request Behavior” choose “Give All Files”.
- Setting environment variable parameter (NMS_LOG):
  - Go to: Control panel, System
  - Go to Advance tab and click Environment Variables
  - Press New in System Variable Window
  - Type in Variable Name: NMS_LOG and Variable Value: full path of directory where you like to keep a logs (example C:\temp).
- Copy all of the SW version files into one directory.
- Go to Utilities menu on the menu bar on the WALKnet ➔ SW Download…➔ File (New Session)
  On the version file, select WALKair 1000 and then select the WALKair_1K.ver under “<$>WALKnet\Projects\Floware\WALKnet\Ver1_0\Product\Data\SWVer\” Make sure the file names in the WALKair_1K.ver exactly matches the software file names. Note that Unix is case-sensitive, therefore if the

file names are in lower case, the WALKair_1K.ver should be edited and the file names therein modified to lower case as well.

- Choose the units to be downloaded.
- Set the TFTP Server IP address.
- Set the time for download and switch over (not mandatory).
- Select the checkbox indicating for a log file.
- Click “Apply”

Launching Pumpkin

1. Run the Pumpkin application.
2. In the Pumpkin window click **Option**.
3. In the **TFTP file system root** field, type in the path of the loaded file where the WALKair software file is located The Pumpkin browser can be pointed to a specific directory location or to a CD-Rom.
4. Verify that the **Read Request Behavior** parameter is set to **prompt before giving file** and that the **static** parameter is set to **Always prompt before accepting** and click **OK**.

Individual Downloading of the Software

Downloading the Terminal Software via WALKnet

1. Select **Software Download** from the *Utilities* menu.
2. Select the BU-BS IP address, and click **OK**.
3. Set the **server IP adders** for the **TFTP parameters**.
4. Set the **File name** of the new Version to **TS_0902.S19 for TS-1000 or TSCR_0902.S19 for TS-1300**.
5. Set the **Action** to **Download to standby**.
6. Click the Terminal(s) icon in the **download to** area, and then select the Terminals IDs from the list of Terminals.
7. Click **Apply**.
8. When the *Pumpkin - confirm read request* window is displayed, click **Grant Access**.
9. In response, the following message is displayed:

   TS_0902.S19 of type octet is required from <Server IP address>

   Additionally, a packet counter starts its count, indicating the start of the download.

The download action takes several minutes. After the download is complete the counter disappears.

Verifying the Terminal Software Download

1. Close the software download window.
2. Select **Versions** from the *Utilities* menu.
3. Select the ID of the loaded TS and click **OK**. The *Versions and Reset management* window is displayed.
4. Verify that the **S.B Version** column in the Software versions table is **9.0**.
5. Close the *Versions and Reset management* window.

Downloading the Software to the Base Station

1. Select **Software Download** from the *Utilities* menu.
2. Select the IP address of the BU-BS, and click **OK**.
3. Set the **server IP address** for the **TFTP parameters**.
4. Set the **File name** of the new version to **BS_0902.S19**.
5. Set the **Action** to **Download to standby**.
6. Select the BS-BU device from the **Download To** list.
7. Click **Apply**. When the *Pumpkin - confirm read request* window is displayed, click **Grant Access**.
8. In the Pumpkin message window, the following message is displayed:

   BS_0902.S19 of type octet is required from <Server IP address>

   Additionally, a packet counter starts its count, indicating the start of the download.

The download action takes several minutes. When the download is complete, the counter disappears.

Verifying the Base Software Download

1. Close the software download window.
2. Select **Versions** from the *Utilities* menu.
3. Select the loaded BS, and click **OK** to display the *Versions and Reset management* window.
4. Verify that **S.B Version** column in the Software Versions table is **09.00**.
5. Close the window.

Version Switchover

The switchover must be performed first at the Terminal and only then at the Base. The switchover can be performed either via LCI or via WALKnet.

The procedure, which utilities LCI, is described in the section below and the procedure that initializes WALKnet is described on page 9.

WALKair Software Switchover via LCI

Performing the Terminal Switchover via LCI

1. Type ***** and press <Enter> to access the Main menu for the BS-BU via LCI.
2. Type **2** and press <Enter> to access the Maintenance menu.
3. Type **3** and press <Enter> to access the Version Control menu.
4. Type **4** and press <Enter> for the software switchover.
5. Type **t** and press <Enter> for the terminal switchover.
6. Type **b** and press <Enter> for the BU.
7. Select **the require TS ID**
8. Type **y** and press <Enter> to approve the selection (ensure that the selected Terminals are the correct ones).
9. Type **y** and press <Enter> to approve the switchover.
10. Type **y** and press <Enter> to approve an independent reset of the Terminal after the switchover.
11. Observe the link failure and subsequent successful link establishment within a few minutes.

Performing the Base WALKair Software Switchover via LCI

1. Type ***** and press <Enter> to access the Main menu for the BS-BU via LCI.
2. Type **2** and press <Enter> to access the Maintenance menu.
3. Type **3** and press <Enter> to access the Version Control menu.
4. Type **4** and press <Enter> for the software switchover.
5. Type **b** and press <Enter> for the base switchover.
6. Type **b** and press <Enter> for the BU.
7. Type **y** and press <Enter> to approve the selection (ensure that the selected Terminals are the correct ones).

8. Type **y** and press <Enter> to approve the switchover.
9. Type **y** and press <Enter> to approve an independent reset of the Terminal after the switchover.
10. Observe the BU reset and successful link establishment with the terminals within a few minutes.

WALKair Software Switchover via WALKnet

Performing the Switchover via WALKnet

1. Select **Versions** from the *Utilities* menu.
2. Select the ID customer of the Terminal for the switchover, and click **OK**. The *Versions and Reset management* window is displayed.
3. Click **Switchover**.
4. Confirm the warning message by clicking **Yes**. A **Completed successfully** message is displayed in the lower left side of the window.
5. Wait for the radio link loss alarm in the *HP.OV alarm* window for the selected TS number. This alarm is an indication that the Terminal has successfully switched Versions and reset itself automatically.
6. Repeat steps 1 to 5 for all the Terminals.
7. After all the Terminals have been successfully switched, switch over the Base station Version in the same way by repeating steps 1 to 5 (in step 2, select the IP address of the BU-BS).
8. Wait a few minutes for the base to reset and the link to be reestablished, so that the Terminals are seen in the WALKnet *registered terminals* window.
9. Verify that all traps are captured by the HP.OV.

NOTE

Do not click **Reset** after clicking **switchover**, as the active software version may become corrupt! The reset is done automatically.

FR/QBRI/Eth Interface Switchover Process

Performing the FR/QBRI/ETH Interface Switchover via LCI

1. Enter the Switch version menu.
2. Type ***** and press <Enter> to access the Main menu for the BS-BU via LCI.
3. Type **2** and press <Enter> to access the Maintenance menu.

4. Type **3** and press <Enter> to access the Version Control menu.
5. Type **4** and press <Enter> for the software switchover.
6. Type **b** and press <Enter> for the interface to the base switchover, or **t** for the interface to the Terminal switchover.
7. Type **T/Q** and press <Enter> for the FR/QBRI/ETH, then type **y** to approve the selection (ensure that the selected Terminals are the correct ones).
8. Type **y** and press <Enter> to approve the switchover.
9. Type **y** and press <Enter> to approve an independent reset of the Terminal after the switchover.

Performing the FR/QBRI/ETH Interface Switchover via WALKnet (only available via WALKnet version 4.00 and up)

1. Enter the FR/QBRI/ETH Interface version menu.
2. From the *Configuration* menu, select either BS-BU or TS-BU.
3. Select the appropriate BS-BU.
4. A window with the proper BS-BU opens, displaying the FR/QBRI/ETH Interface.
5. Right-click on the FR/QBRI/ETH Interface, and select **Versions** from the displayed menu.
6. Click **Switchover**. Wait three minutes, and then click **Refresh**.
7. Verify that the Active and backup versions have switched over.

Appendix A: Troubleshooting

Symptom	Correction
The Pumpkin *confirm read request* window does not appear on the server PC.	■ Verify that Pumpkin is running on the Server IP address configured in the TFTP parameters. ■ Check the definitions of server in the *Options* window of the Pumpkin application. ♦ The **read request behavior** parameter should be **Prompt before giving file**. ♦ The **static** parameter should be **Always prompt before accepting file**. ■ Send a ping to the BU to verify that TCP/IP communications are operational.
The **Ack** packet counters in the Pumpkin application does not run after **Grant Access** is clicked.	■ Check that the **TFTP file system root** path in the Options window of the Pumpkin application is correct. ■ Check that there is no space before the data in the **File Name** field in the TFTP parameters field of the *Software Download* window, or in LCI, or that the filename is correct in the **Session Summary** area.
The message **SNMP error response buSwDownloadDestDevice.0 (GenErr)** appears in the *Software Download* window.	Verify that Pumpkin is running on the Server IP address configured in the TFTP parameters.
The messages **Transmission of TS_0**902**.s19 is timed out** and **Transmission of TS_0**902**.s19 is aborted** appear in the Pumpkin message window.	■ Verify that the link with the selected Terminal is OK (this message is relevant for Terminal download only). ■ Repeat the Terminal download steps after verifying that a radio link has been established.
The packet counter in the Pumpkin window freezes its count.	■ Verify that Ethernet connection to the BU-BS is OK (ETH LED status is green). ■ Verify that there are no problems with the Ethernet network (send a test ping to the BU-BS IP address).

Symptom	Correction
The **S.B** (Standby) version column in the *Versions and Reset Management* window is **Not Valid** after the download is complete.	Check that the **File Name** in the *Software download* window is relevant to the BU. For example: The file called **BS_XXXX.S19** is relevant to the Base download.