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Introduction

card_1 Backup is a tool which automatically makes backup copies of your project data. It can be easily integrated into your company-wide backup policy.

The card_1 projects are managed centrally using a database system. Information belonging to any one project can be scattered across the hard drive. The same applies to the projects themselves which can be created in any folder.

card_1 Backup was developed to provide you with the means to integrate the project backup process into your company-wide backup policy. card_1 Backup can be run on any operating system with a Java Runtime Environment (JRE). You can start card_1 Backup either manually or as a scheduled task using (on a timer) the command line of your operating system.

- By default, the log file is stored in the backup program folder. If the backup program folder is stored in a write-protected sector, you may change the storage location of the log file: Use an editor to open the file Log4j2.xml in the backup program folder and replace './log' in the property line by the path to the log folder.

```
<Property name="LOG_DIR">????</Property>
```

Use of UTF-8

From JDK 19, the UTF-8 character set is used by default. Prior to JDK 19, UTF-8 was only used under Microsoft Windows 11, Microsoft Windows Server 2019 or Linux. In order to use UTF-8 for backup purposes, the parameter '-Dfile.encoding' must be set in the Java call. If the parameter is not set, the backup will be cancelled.

Example: Parameter for 'Cp1252' (Code for den Western European character set)

- Microsoft Windows 11, Microsoft Windows Server 2019

```
"c:\Program Files\Java\jdk-21\bin\java.exe" -Dfile.encoding=Cp1252  
-jar "C:\Program Files\IBuT\CARD101\CARDP\Backup\CardBackup.jar"  
/config="C:\CARD_Projekte\CARD101\dbconfig.dat"  
/destination="C:\CARDBACKUP101" /increment /silent
```

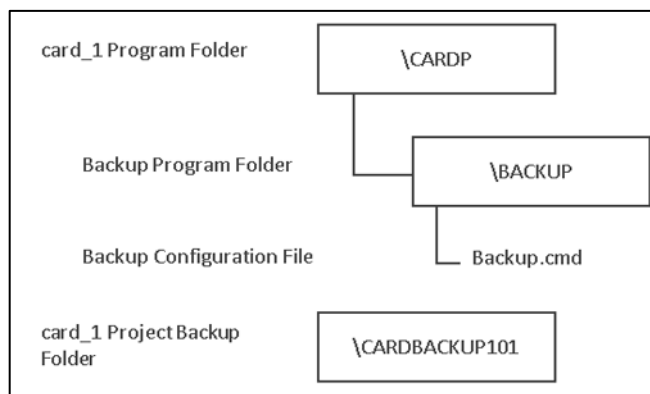
- Linux

```
.../java -Dsun.jnu.encoding=Cp1252 -Dfile.encoding=Cp1252 -jar  
cardbackup.jar ...
```

Installation

card_1 Backup is automatically installed and configured in your card_1 program folder as part of the regular card_1 System. You can install this software independently of the regular card_1 installation. Thus it is possible to install card_1 Backup in a different location, e. g. on the server.

Installing card_1 Backup during the card_1 Installation (standard installation)



The Backup program as well as an executable backup configuration file are installed in the sub-folder \BACKUP of the card_1 program folder. card_1 Backup is automatically updated via Freshup.

- **Backup Program Folder:** The folder \BACKUP is installed as a subfolder in the card_1 program folder. The backup program is installed in this folder.
- **Backup Configuration File (*.cmd):** An executable configuration file is created in the folder \BACKUP. This file is created as a shortcut in the card_1 shortcut folder and can be started directly.

Example: Content of a Backup configuration file

```
"c:\Program Files\Java\jdk-21\bin\java.exe" -Dfile.encoding=Cp1252 -jar
"C:\Program Files\IBuT\CARD101\CARDP\Backup\CardBackup.jar"
/config="C:\CARD_Projekte\CARD101\dbconfig.dat"
/destination="C:\CARDBACKUP101" /increment /silent
```

- **Email Configuration File (email.xml):** This way, backup error information may be sent by email to a pre-defined recipient (see [Control Parameters: Email Configuration File](#)). By default, the configuration file is stored in the folder of the backup program. Please copy this file in the card_1 project compilation folder to be saved.

- **Project Backup Folder:** A project backup folder CARDBACKUP101 is created alongside the card_1 project compilation folder. This is where card_1 Backup stores the backup copies of your card_1 projects.

Follow-up Installation of card_1 Backup

Please start the card_1 installation and select 'Further Installations > Install card_1 Backup (Backup Projects)'. Please refer to our [Knowledge Base](#) for further information.

Hinweis: If you install card_1 Backup to a location other than the card_1 program folder, card_1 Backup will not be updated via Freshup.

Start

Once you have started card_1 Backup via the shortcut created by the installation program, card_1 Backup makes backup copies of your card_1 projects in the project backup folder. As an alternative you can run card_1 Backup as a scheduled task.



Which projects are included?

You can decide which projects should be included via the card_1 project manager: By selecting the project attribute **Include in card_1 Backup**, the project will be included in the backup process.

Which projects are excluded?

card_1 Backup does not make backup copies of the following projects:

- ☐ Projects which do not match the current data version of the project compilation folder
- ☐ Any locked projects, as they are being accessed

Control Parameters: Backup Configuration File

card_1 Backup features the following command line switches:

Parameters	Description	Comment
config	Path to the card_1 database configuration file dbconfig.dat in the local file system. Example: /config="C:\CARD_Projects\CARD101\dbconfig.dat"	required
destination	Target folder where the backup copies of the card_1 projects are stored. Example: /destination="C:\CardBackup101"	required, without the trailing back-slash
shareFS	Share name for client access plus server name (smb share).	optional
localFS	Share path in the local file system. This path is required to prevent the program from accessing the project folder via its share name. Project folder path entries which make use of the share name will be replaced with the local path.	optional, must be given when using 'shareFS'
increment	The database will be saved only in case it was changed since last backup.	optional (recommended)
silent	This switch suppresses any messages onto the console. You do not need a console for card_1 Backup when running it on a Unix or Linux server.	optional
help	A brief help on the command line switches is displayed.	

Control Parameters: Email Configuration File

During backup, the programme creates a log file. This file contains information on the backup of all projects registered in the project compilation folder.

If the backup runs in an automated process in the background, an error check must be carried out afterwards. Experience shows that this check is performed irregularly so that faulty backups may remain undetected. The error information of the backup may be emailed to a pre-defined recipient.

By default, the configuration file for email notification (file email.xml) is stored in the folder of the backup program. Please copy this file in the card_1 project compilation folder to be saved.

Hinweis: The email will be sent only if the backup is faulty and the configuration file is correctly provided with the required parameters.

Parameters	Meaning
auth	Authentication on/off: true false
cc	Email address of Cc recipient
debug	Debug mode for troubleshooting on/off: true false
from	Email address of sender
passwd	Password if auth="true" is used
port	SMTP port: 25 465 587 25: unencrypted
sendMail	Email dispatch on/off: true false
smtphost	SMTP server name, e.g. smtp.muster-mann.de
subject	Email subject text
tlseable	StartTLS, SSL/TLS: true false Ports 465 587 require 'auth'
to	Email address recipient

Examples

Hinweis: Please also note the section [Use of UTF-8](#).

Windows Client

The following example demonstrates how card_1 Backup is run on a local Windows workstation. The card_1 projects are also managed on the local Windows workstation.

Windows Client

- ☐ Name of the Windows workstation and the share: not required

card_1 Projects

- ☐ Path to the project compilation folder: C:\CARD_Projects\CARD101
- ☐ Path to the database configuration file: C:\CARD_Projects\CARD101\dbconfig.dat
- ☐ Path to the database folder: C:\CARD_Projects\CARD101\CARDDDB

card_1 Backup

- ☐ Path to the Backup program folder: C:\Program Files\IBuT\CARD101\CARDP\BACKUP
- ☐ Name of the Backup configuration file: backup.cmd
- ☐ Path to the project backup folder: C:\CardBackup101

Content of the Backup Configuration File

```
"c:\Program Files\Java\jdk-21\bin\java.exe" -Dfile.encoding=Cp1252 -jar
"C:\Program Files\IBuT\CARD101\CARDP\BACKUP\CardBackup.jar"
/config="C:\CARD_Projekte\CARD101\dbconfig.dat" /destination="C:\CardBackup101"
/increment /silent
```

Windows Server

The following example demonstrates how card_1 Backup is run on a Windows server. The card_1 projects are also managed on the Windows server.

- The parameters 'localFS' and 'shareFS' are required only if accessing the card_1 project compilation folder via the share name is not possible.

Windows Server

- Name of the Windows server: Projectserver
- Share name: Projects

card_1 Projects

- Local path to the card_1 project compilation folder: C:\CARD_Projects\CARD101
- Path to the database configuration file: C:\CARD_Projects\CARD101\dbconfig.dat
- Local path to the database folder: C:\CARD_Projects\CARD101\CARDDB

card_1 Backup

- Path to the Backup program folder: C:\Program Files\IBuT\CARD101\CARDP\BACKUP
- Name of the Backup configuration file: backup.cmd
- Local path to the project backup folder: C:\CardBackup101

Content of the Backup Configuration File

```
"c:\Program Files\Java\jdk-21\bin\java.exe" -jar
"C:\Program Files\IBuT\CARD101\CARDP\BACKUP\CardBackup.jar"
/config="C:\CARD_Projekte\CARD101\dbconfig.dat" /destination="C:\CardBackup101"
/shareFS=<\\Projektserver\Projekte> /localFS=C:\CARD_Projekte\CARD101 /increment
/silent
```