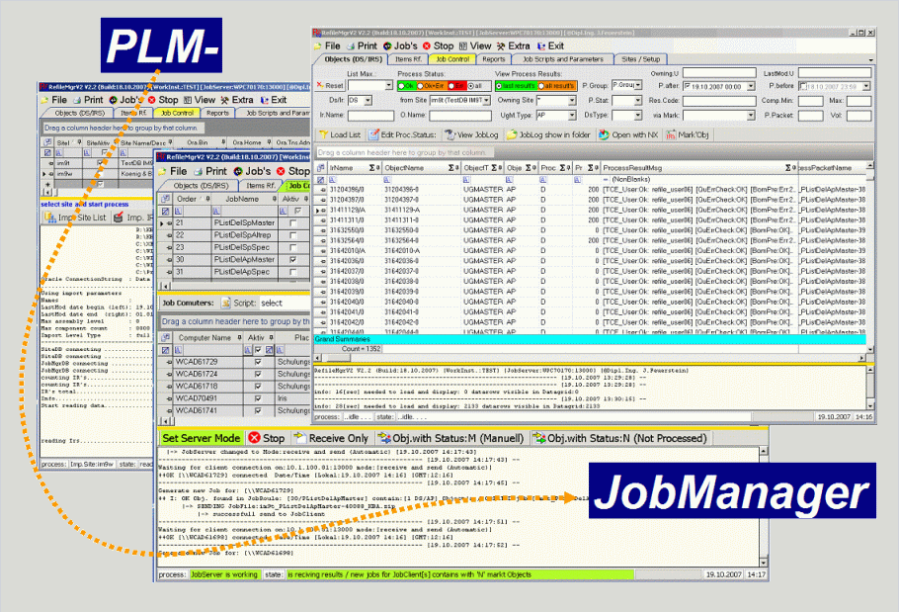
SIEMENS



PLMJOBMANAGER

NX

TEAMCENTER

NX-REFILE

PLMJobManager NX-Refile

Refiling NX-Parts with Teamcenter Engineering environment

Josef Feuerstein, Christof Keller

© 2009. Siemens Product Lifecycle Management Software Inc. All rights reserved

Siemens PLM Software

SIEMENS

Table of contents

Introduction	page:: 3
NX-Refile with the PLMJobManager	page: 4-5
Introduction	page: 6
Interface of the PLMJobManager NXRefile	page: 7
Introduction	page: 8
Setup and control of the Refile options and scripts	page: 9
Working with the JobServer: Job Control	page: 10
Chart Overview “Mutisite environment”	page: 11
Working with the JobServer: Reports	page: 12
System requirements	page: 13
Service models …	page: 14
Teamwork …	page: 15
Success stories …	page: 16

© 2009. Siemens Product Lifecycle Management Software Inc. All rights reserved

Introduction

What is Refile***?***

At any new version of NX, there are new functionality and modules. This causes changes of the data model.
When opening a Part-file, there is a check in which version it was saved.
When the saved version is older than the current one, NX is converting the data model inside the Part-file. – This is called Refile

Why Refile?
From our development… we are able to open Part-files from Version 12.
Therefore we do not need a Refile?
When working with Teamcenter, we do not have write access to loaded or refiled parts.
Why do we have no write access?

- Part i owned by a different group
- Part is released
- Part has a different owning site

Parts from a prior NX-version get a modification flag after loading If we refile the Parts during open it will increase the loading time. Without write access, we do a refile every time, when opening a part or assembly. Part is from an „old“ project … does anybody know the NX-Version at that time? … does anybody know that there are „old“ projects?
To have a clean NX-Environment it is necessary to Refile all Partfiles automatically and secure with the **„ugmanager_refile_program.exe Utility“.**

© 2009. Siemens Product Lifecycle Management Software Inc. All rights reserved

SIEMENS

NX-Refile with the *PLMJobManager*

The PLMJobManager organize the conversion of the NX-Data with the NX-Refile utility inside a Teamcenter environment.

Benefit of a NX-Refile with the PLMJobManager:

- ✓ Unique setup and control of the Refile-Options.
- ✓ Distribution of the Refile process to multiple computer-clients and organize them. (Less Refile process time)
- ✓ Avoid „multiple“ Refile of NX-Parts.
- ✓ Supports the preparation of a Refile project.
- ✓ Simplifies the upgrade to newer NX-Versions.
- ✓ Both the TcEng Single and Multisite is supported
- ✓ Processing of „native“ NX data is also possible

© 2009. Siemens Product Lifecycle Management Software Inc. All rights reserved

SIEMENS

NX-Refile with the *PLMJobManager*

It supports and optimizes the upgrade to a higher NX-Version within a unique procedural method.

The following methods are supported from the PLMJobManager:

- ✓ processing sequence of the NX Partfiles:
  - Single Parts → recent parts at first, older parts at last
  - Assemblies → with the „Button Up“ principle
    (Button Up = dependent of the amount of components, from button to top)
- ✓ Adjustments for processing sequence i.e. volumes, groups, projects etc…
- ✓ Analysis of the Refile-Logfiles for Status, error messages, warnings, etc..
- ✓ Storage of the Client NX-Refile-Logfiles.
- ✓ Center control of the Refile processes in a Multisite environment
  (with a central PLMJobServer Database we are able to serve multiple sites)

© 2009. Siemens Product Lifecycle Management Software Inc. All rights reserved

Introduction

Phase 1 – Analysis

- How many Datasets/Parts
- Check the Data integrity
- Analyse the environment (Precise/Imprecise, Loadoptions, Reference-Sets, Release status ...)
- Analyse and Setup the Refile-Methods (order, settings and parameters)
- Check of disk space
- Clone the productive environment and Tests …

Phase 2 – Preparation and Test

- PlmJobManager-OS-User and TC-User setup
- Data cleanup – purge Datasets,
- Check if all Datasets are available in the volume – purge Volumes
- Check data with utilities „update_all_features, update_all_drawings, update_all_smart_models“
- Check assemblies
- Installation of the PlmJobManager -Clients
- Access via Remote Desktop Connection or VNC
- Installation PlmJobManager -Manager-Tool (Server + Clients)
- Import PlmJobManager-Database from TCEng.
- Define Datapackage and Order for the PlmJobManager
- Define available Timeframes (day, night, take care of backup times)
- Check Licences
- Check-Out Objects … check them in, or mark them.
- Run Refile-Tests

Phase 3 – Performing

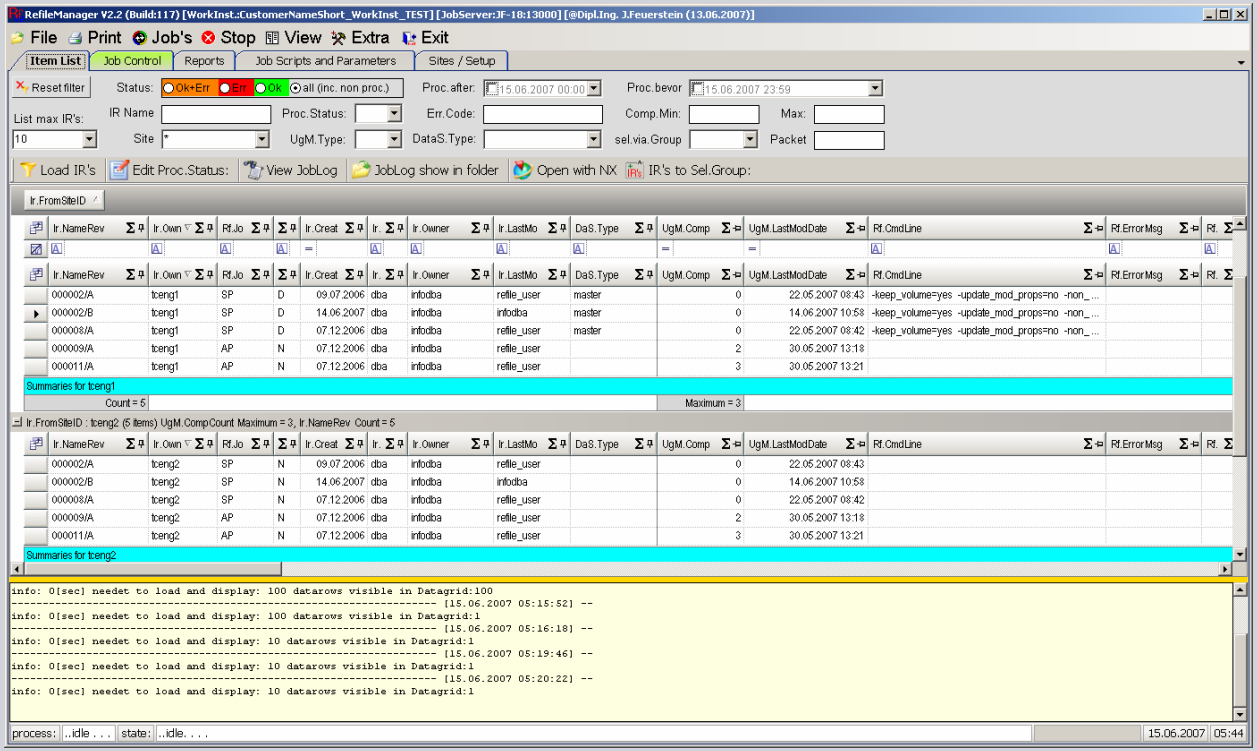
- Update the PlmJobManager-Database
- Explicit Check-Out Objects / User reference in a folder
- Check-Out Objects → prepare a Check In
- Run a Clearlocks
- Backup the Data
- Create Data packages from the PlmJobManager
- Refile-Packages at the PlmJobManager-Clients
- Analyze the PlmJobManager-Database
- Analyze the error Refile-Parts
- Repair the error Parts
- Send repaired Parts for a new Refile
- Analyze the Refile results … create reports from the PlmJobManager

© 2009. Siemens Product Lifecycle Management Software Inc. All rights reserved

Interface of the *PLMJobManager* NXRefile

The Interface is divided into different task areas:

- **Item List** → Shows the Itemlists and the Refile results
- **Job Control** → Organize and control of the PLMJobClient processes
- **Reports** → Analysis of the Results
- **Job Scrips and Parameters** → Setup and control of the Job parameter and scripts
- **Sites / Setup** → Setup and control and dispatching of the data (Item's, Datasets)

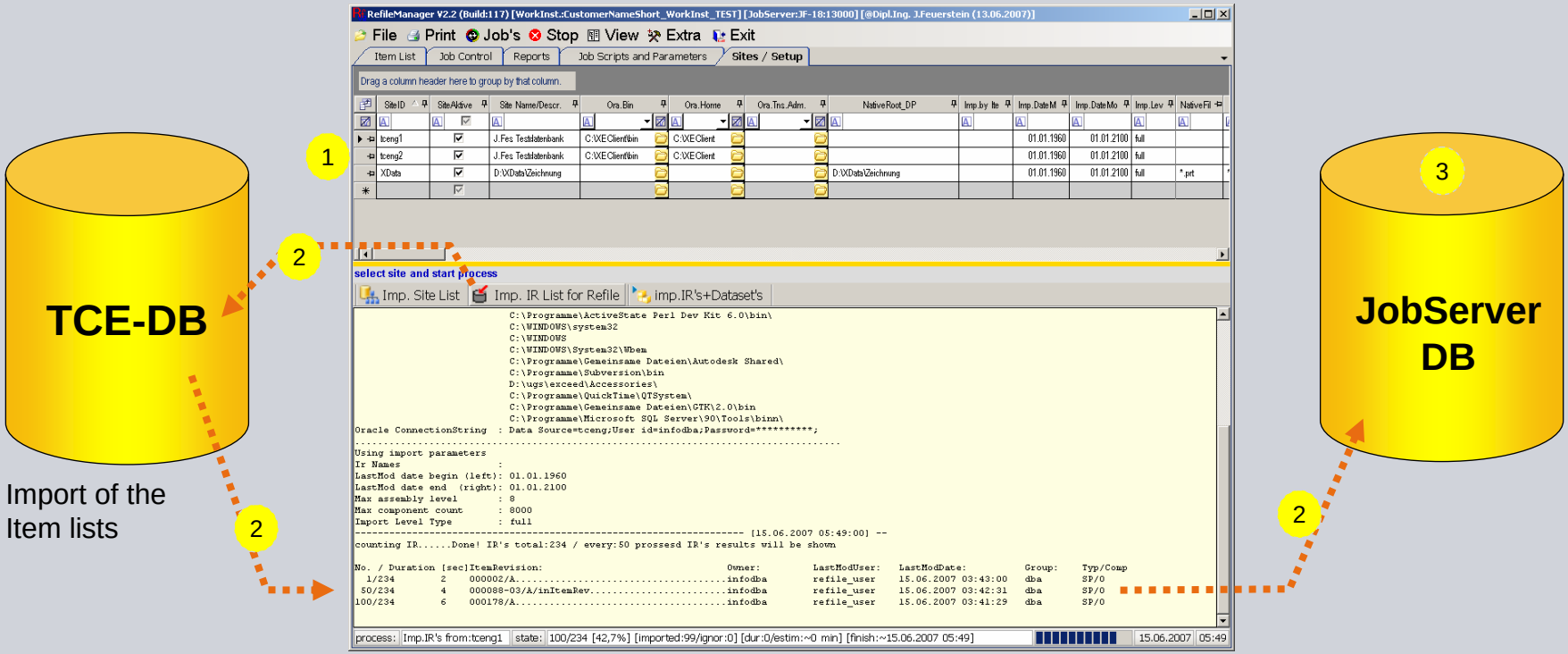


© 2009. Siemens Product Lifecycle Management Software Inc. All rights reserved

Introduction

Load the data into the PlmJobManager

- In the PLMJobServer we capture all customer Sites **(1)**
- Import of all Item list data into the PLMJobServer-DB **(2)**.
- This is the content of the PLMJobServer-DB **(3)** and they are the database for the NX-Refile Process



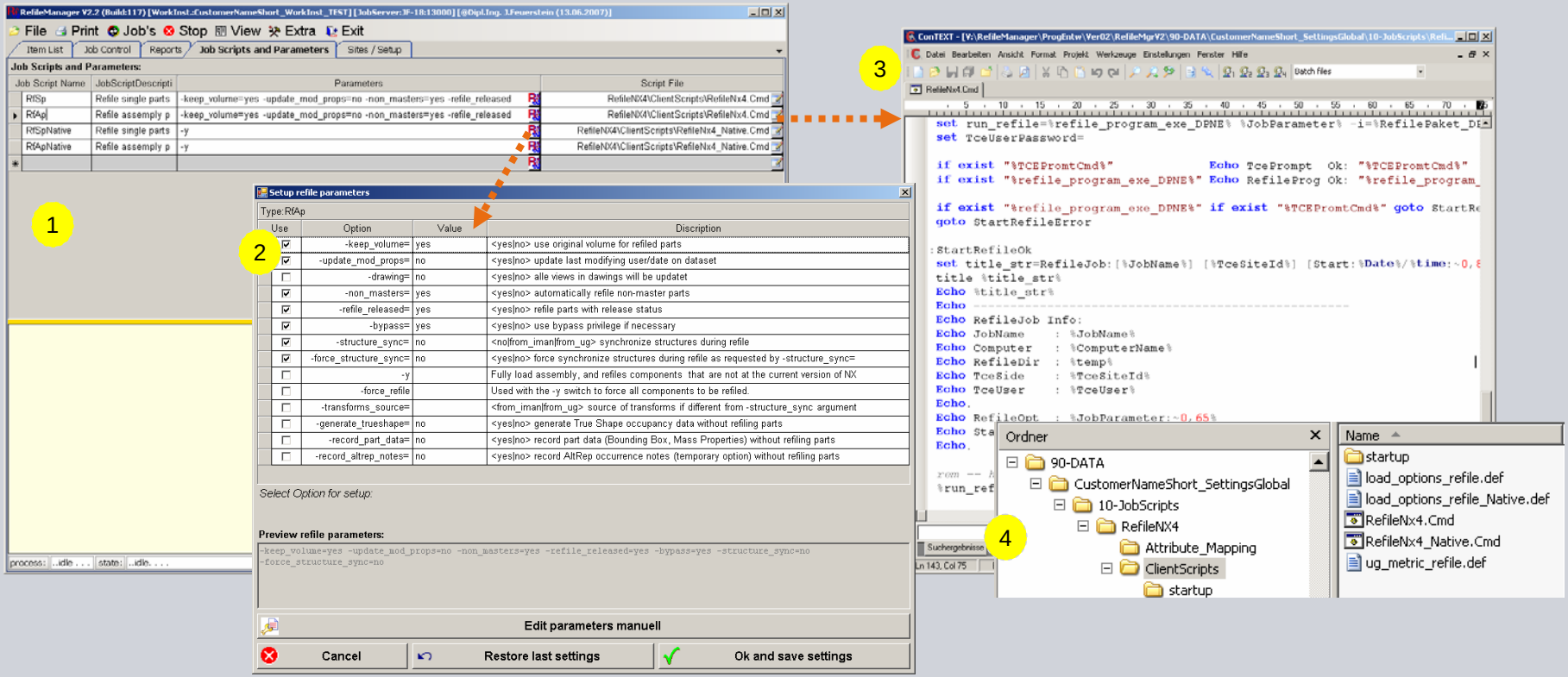
© 2009. Siemens Product Lifecycle Management Software Inc. All rights reserved

Setup and control of the Refile options and scripts

The setup and control of the NX-Refile Parameter **(2)** is done inside the JobServer **(1)**. Also the needed scripts **(3)** an the NX-Refile setup **(4)** will be organized there.

Benefit:

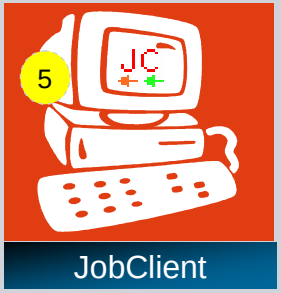
- ✓ Easy administration of all NX-Refile parameters. **(2)**
- ✓ Clear organization of the scripts **(3)** and setups **(4)**



© 2009. Siemens Product Lifecycle Management Software Inc. All rights reserved

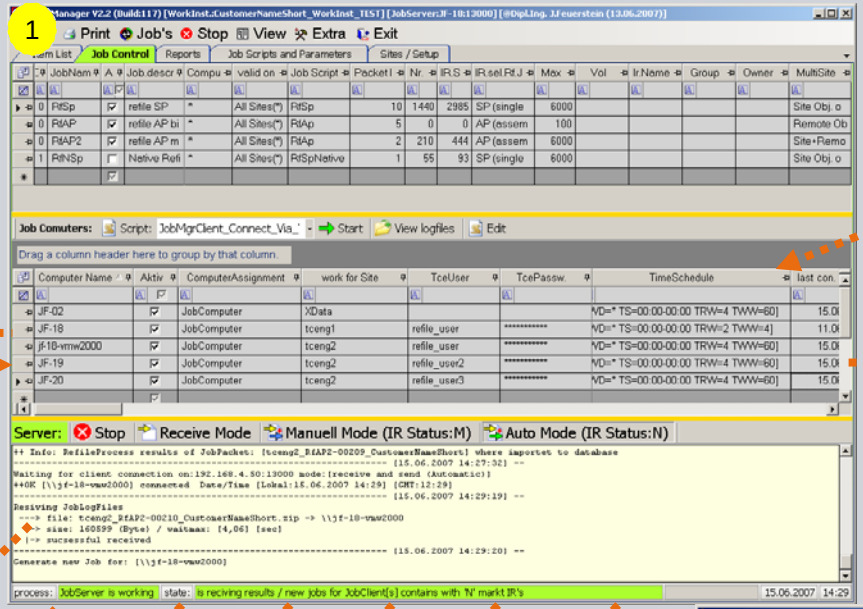
Working with the JobServer: Job Control

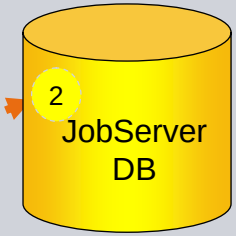
The JobServer **(1)** will be located at one of your locations. It organizes the JobServer-DB **(2)** organizes all Job Clients **(3)** and storage of the Refile results. **(4)**



6

7

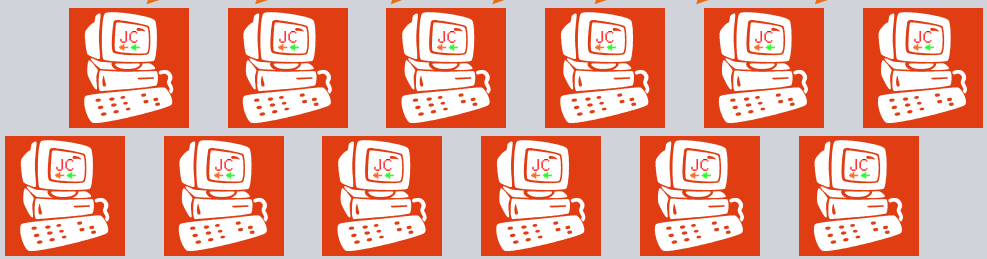


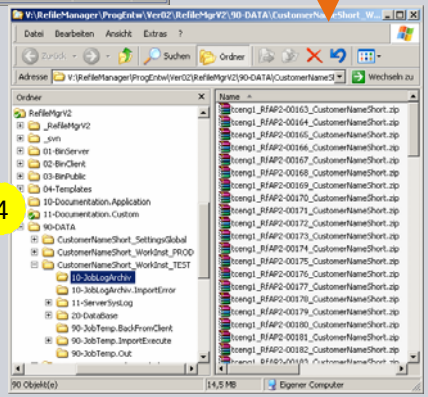


The JobServer if organizing the received JobLogfiles

Procedure of the processing:
The JobClients **(5)** are connecting to the JobServer **(1)** and receiving a Refile Job (packet) **(6)**. The JobClient hands over the Results to the JobServer **(7)**.

3 Coordination of the JobClient‘s



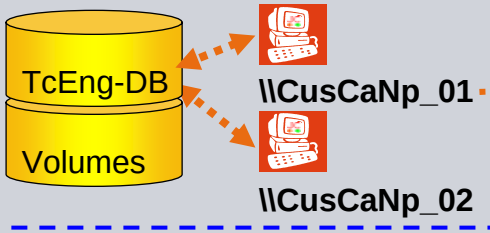


© 2009. Siemens Product Lifecycle Management Software Inc. All rights reserved

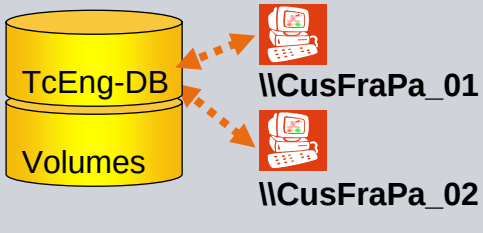
Chart Overview “Mutisite environment”

Sites

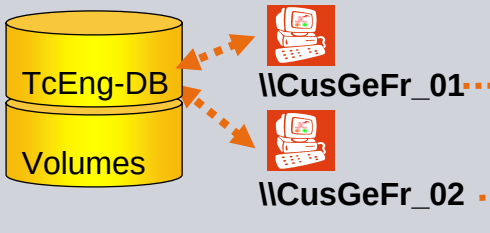
Site: USA
Location: Newport, Carlifornia



Site: Europe1
Location: Paris, France

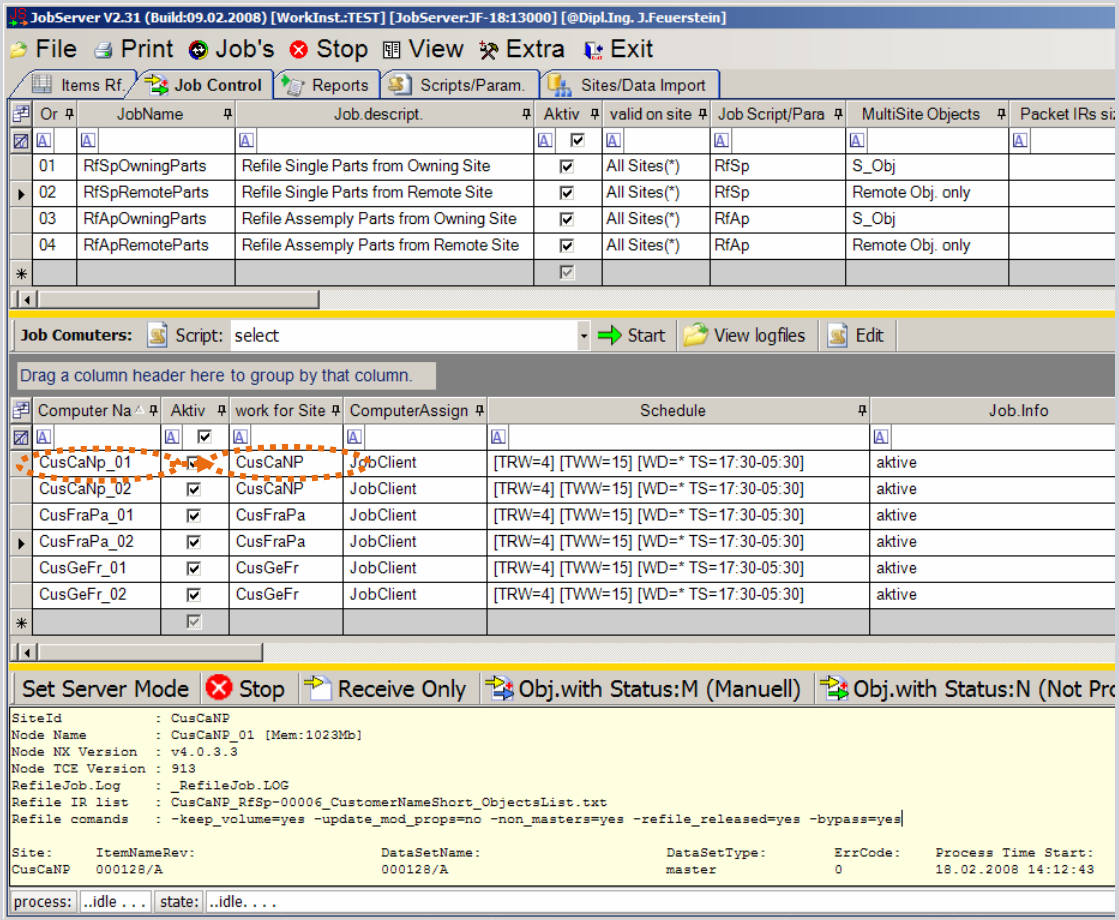


Site: Europe2
Location: Frankfurt, Germany



JobServer and NXRefile environment

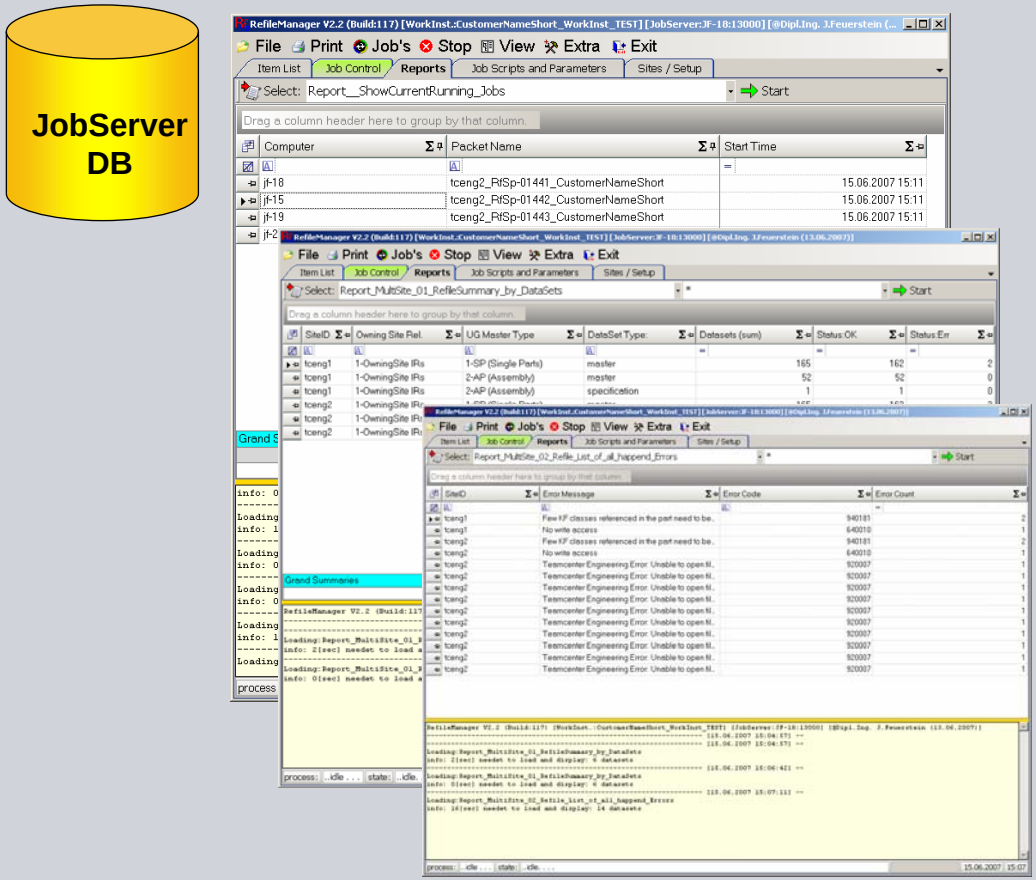
The JobServer will be located at one of your locations. From all sites the IR Lists for NX-Refile will be imported to the JobServer Database



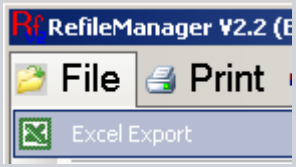
© 2009. Siemens Product Lifecycle Management Software Inc. All rights reserved

Working with the JobServer: Reports

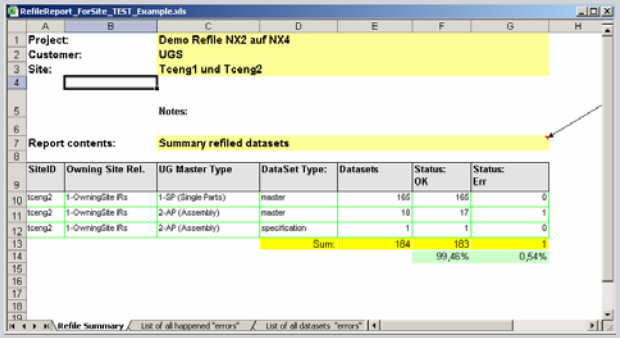
Reporting functionality:
- Monitoring of the JobClient processes
- Analysis of the Refile-Logfiles



The Excel Export functionality allows you to easily store all needed data for further own calculations.

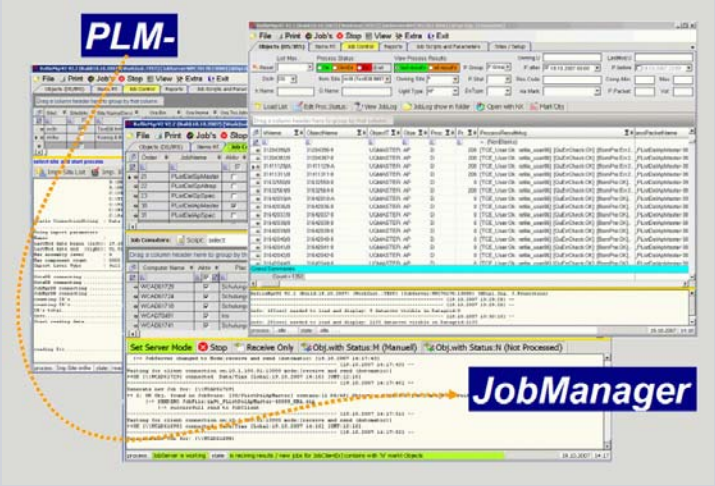


Use the clipboard (copy/paste) functionality if some data is needed in your own documents.



© 2009. Siemens Product Lifecycle Management Software Inc. All rights reserved

System requirements



JobServer:

- WinXP or Win2000 Workstation
- W2003 or W2000 Server

JobClient:

- Workstation WinXP or Win2000
- with Full NX- und TCE-Installation

© 2009. Siemens Product Lifecycle Management Software Inc. All rights reserved

SIEMENS

Service models …

Full-Service (20% Customer; 80% SIEMENS PLM)

- SIEMENS PLM covers the complete planning, the analysis and the Refile project itself with the PlmJobManager.
- We see 20% for customer supply…

Support (80% Customer; 20% SIEMENS PLM)

- We only make support thru consulting, workshops or agreed service days.
- Planning analysis and the Refile itself does the customer.

Refile Time calculation example:

- Approx. 320 NX-Datasets (DS) each Client and each hour.
- With a Client availability of 12 h, we receive 3840 DS/day each client.
- → multiple clients needed
- → needed Refile period?

© 2009. Siemens Product Lifecycle Management Software Inc. All rights reserved

SIEMENS

Teamwork …

Teamwork for customer projects in the area of:
PLMJobManager – NXRefile
Siemens PLM ⇦ Customer ⇨ Dipl.Ing. J.Feuerstein

We have a common target:
⇨ defined tasks as a business model

© 2009. Siemens Product Lifecycle Management Software Inc. All rights reserved

SIEMENS

Success stories …

Refile-Projects:

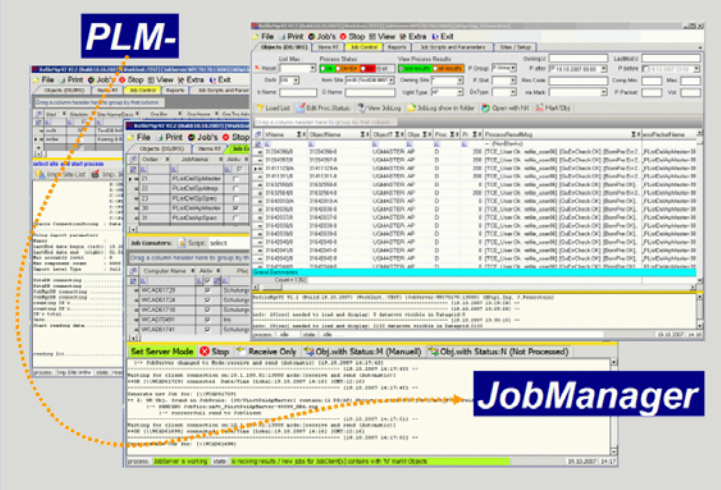
- Koenig & Bauer AG
- B/S/H (Refile NX2 + NX4) (28 Standorte)
- Windmöller und Hölscher
- Dorst Technologies
- Isringhausen
- Freudenberg
- MontBlanc
- Reintjes
- Siemens Konstanz I&S Postsysteme
- Stabilus
- Möller
- Bizerba
- Renk AG Augsburg
- Grob (in preparation)
- ASML (in preparation)

~ 8.000.000 Datasets successfully refiled with PLMJobManager

© 2009. Siemens Product Lifecycle Management Software Inc. All rights reserved

SIEMENS

Thanks for your attention



Josef Feuerstein, Büro Feuerstein
Christof Keller, Siemens PLM
http://www.PLMJobManager.com

© 2009. Siemens Product Lifecycle Management Software Inc. All rights reserved

Notes