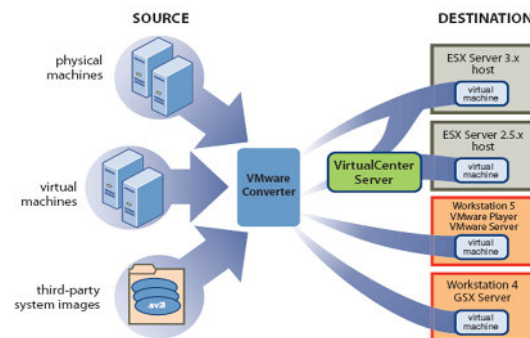


# Modul C: Konversion von physischen PC in VM

**Inhalt:** Mit der – in der Starter Edition ebenfalls frei erhältlichen – Software VMware Converter lassen sich virtuelle Maschinen aus echten physischen PC erstellen. Diese Software bietet diverse Konvertierungsmöglichkeiten, wovon leider nicht alle in der freien Starter Edition zur Verfügung stehen.

Die Konversion kann – mit etwas mehr Handarbeit – auch mit anderen Werkzeugen gelingen (neue VM anlegen und die reale Harddisk mit einer Imaging-Software wie Acronis TrueImage kopieren, Treiber manuell austauschen). Dies führt hier jedoch zu weit.



Als Beispiel erstellen wir ein virtuelles Windows 2000 Prof. aus einer Backup-Datei. Also:

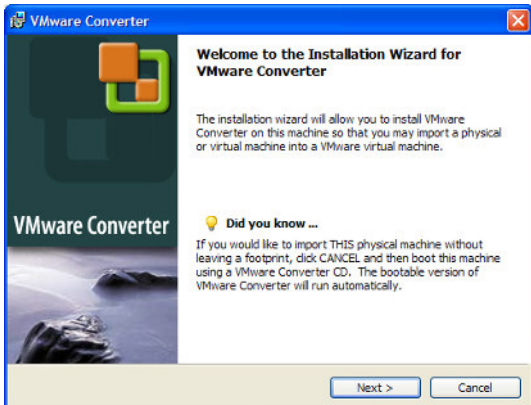
**Quellsystem:** Windows 2000 Prof. (altes Compaq Armada Laptop)

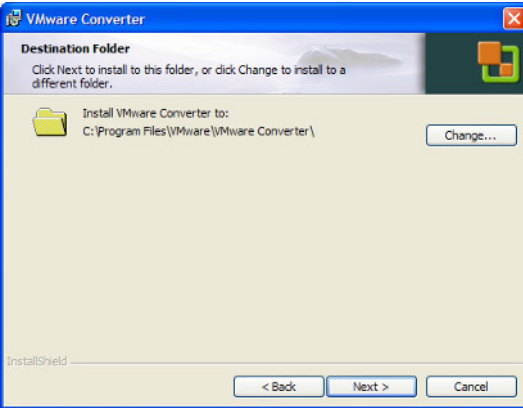
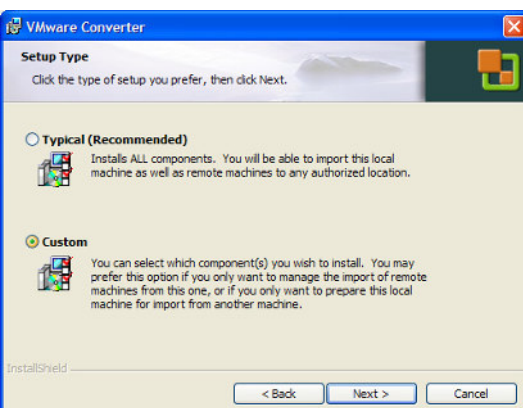
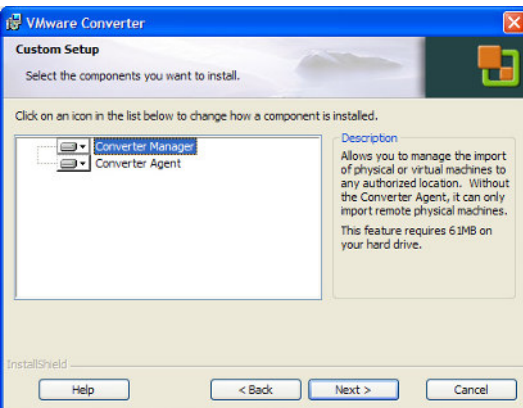
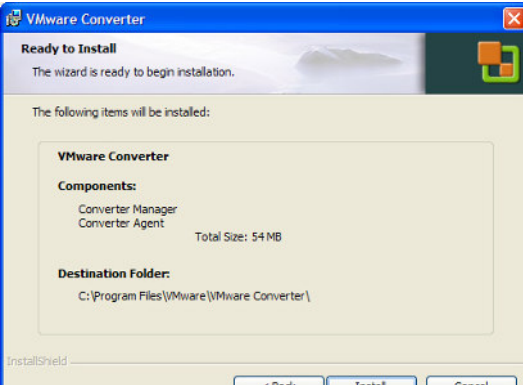
**Quellmedium:** Abbilddatei mit Acronis TrueImage 8 (oder neuer)

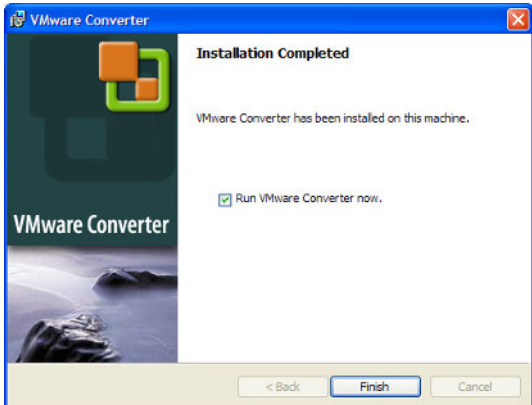
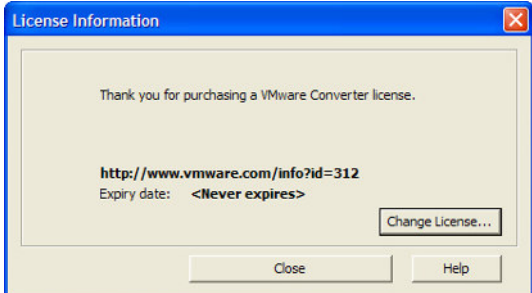
**Zielsystem:** VM für VMware Server

## C.1 VMware Converter installieren

Wir installieren VMware Converter Starter Edition.

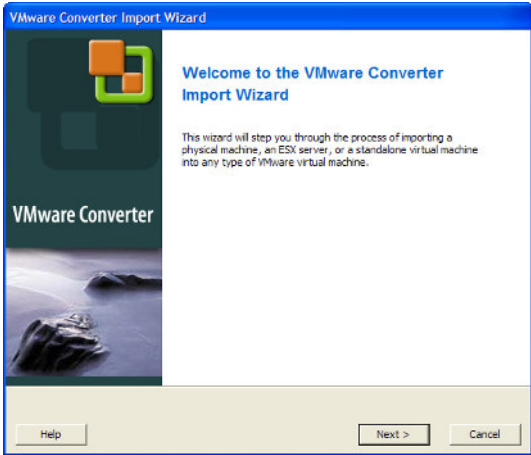
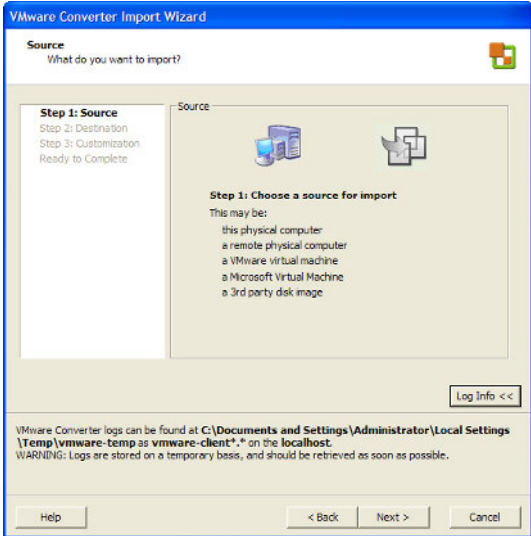
| Vmware Converter installieren |                                                                                     |                                                                                                       |
|-------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Nr.                           | Wo                                                                                  | Bemerkungen                                                                                           |
| 1                             |  | VMware Converter kann installiert oder von einer CD gestartet werden, letztere ist leider nicht frei. |

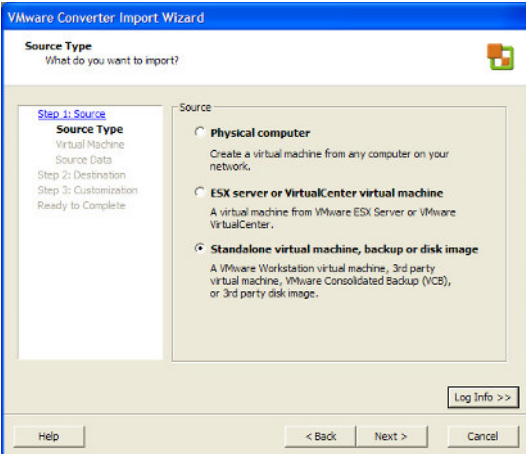
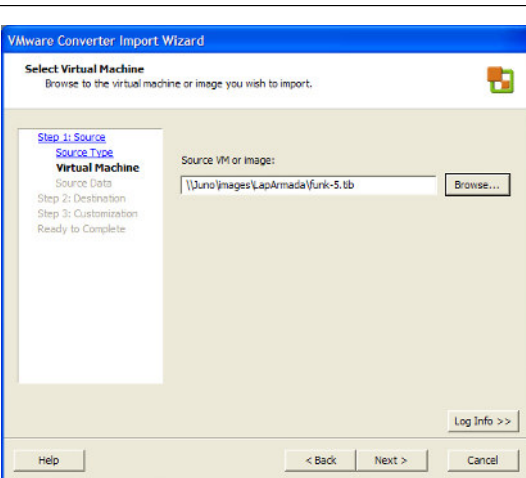
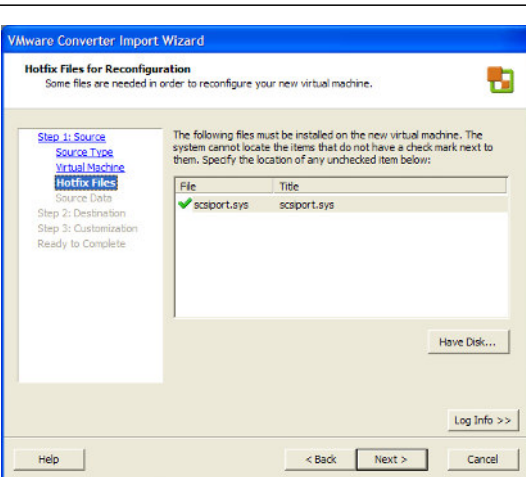
|   |                                                                                     |                                                         |
|---|-------------------------------------------------------------------------------------|---------------------------------------------------------|
| 2 |    | Speicherort angeben                                     |
| 3 |   | wir wählen Custom                                       |
| 4 |  | Wir brauchen beide Komponenten                          |
| 5 |  | ...und der Assistent ist schon bereit zur Installation. |

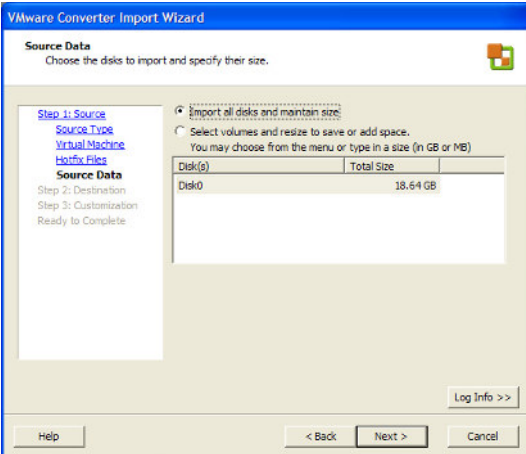
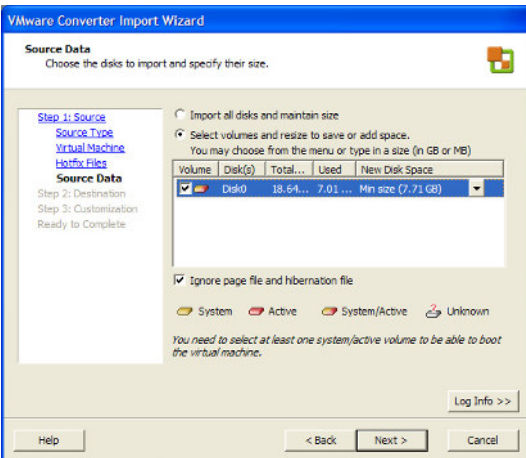
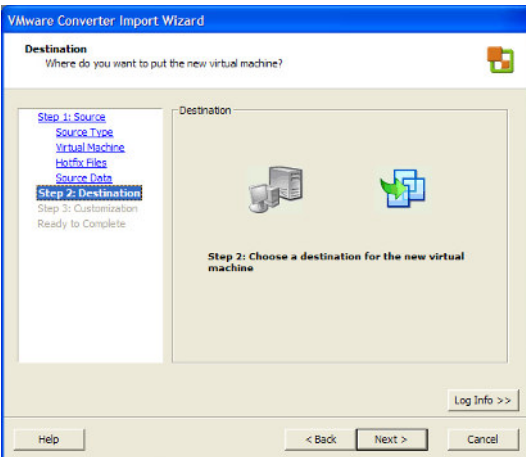
|   |                                                                                     |                                                                                                                         |
|---|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| 6 |    | <p>Die Installation braucht meist keinen Neustart. Wähle <b>Run VMware Converter now</b>.</p>                           |
| 7 |    | <p>Für die volle Funktionalität muss eine Lizenz gekauft werden. Zu Demozwecken wurde hier eine solche eingetragen.</p> |
| 8 |  | <p>Mit <b>Close</b> startet VMware Converter im vollen Modus.</p>                                                       |

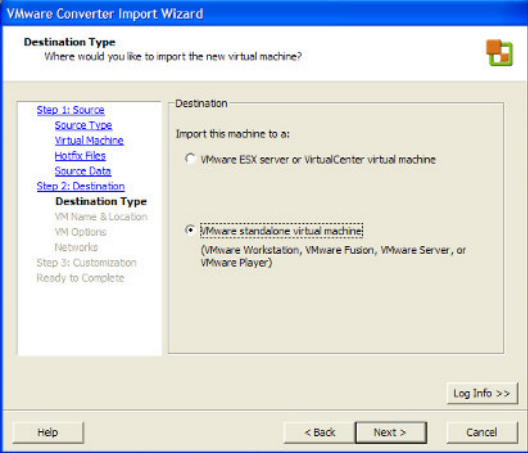
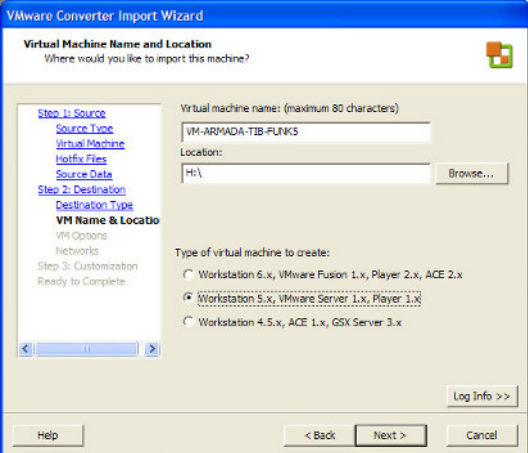
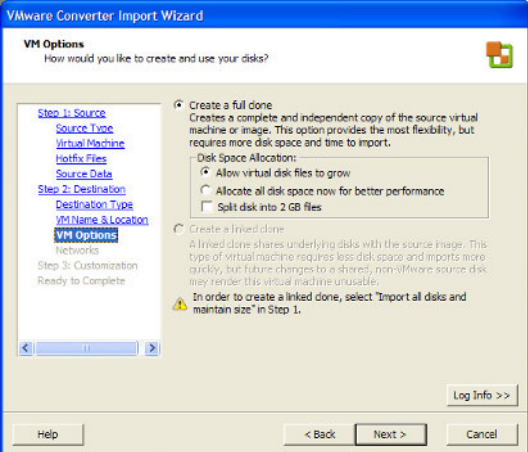
## C.2 Konversion aus Abbilddatei

Wir erstellen ein virtuelles Windows 2000 Prof. aus einer Acronis Trueimage-Datei. Diese Datei ist eine bereits vorhandene Komplett-Sicherung des Laptops. Man könnte das Laptop auch live importieren; dies setzt aber die Installation eines Agenten voraus. Verwendet man die Abbilddatei, kann absolut nichts schiefgehen.

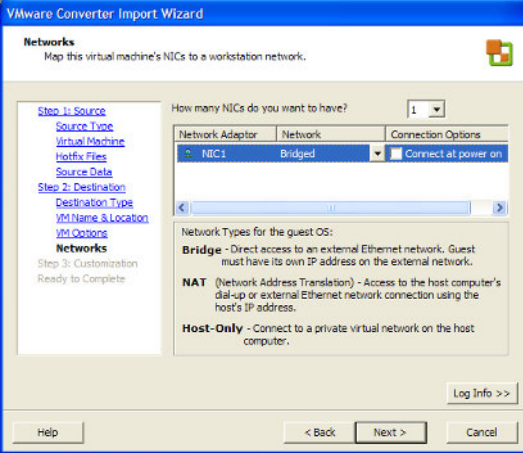
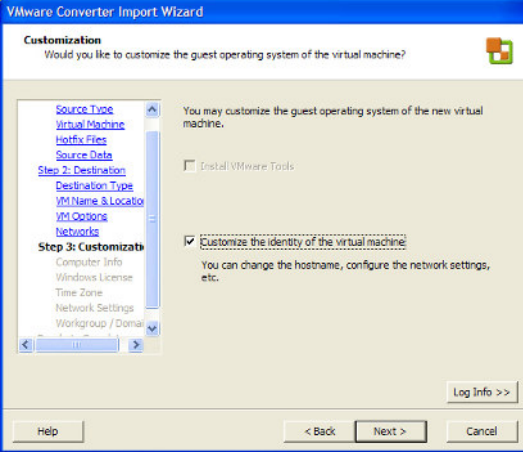
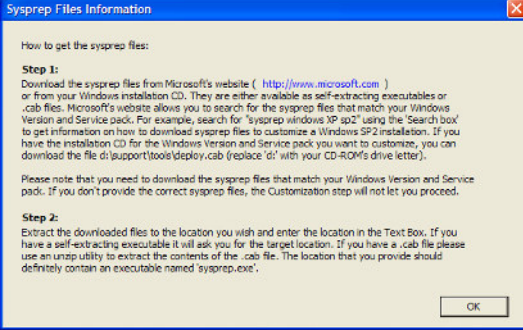
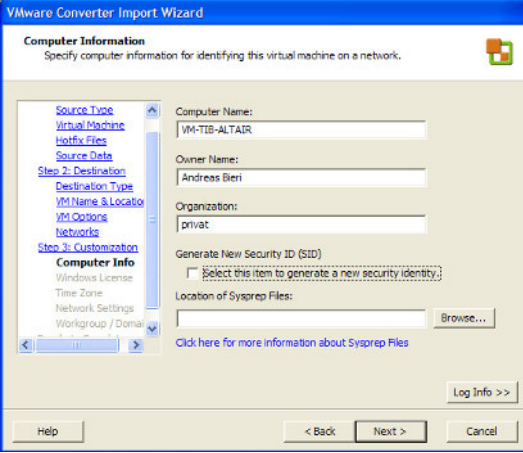
| Konversion aus Abbilddatei |                                                                                     |                                                                   |
|----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| Nr.                        | Wo                                                                                  | Bemerkungen                                                       |
| 1                          |   | Wir starten den Import Wizard.                                    |
| 2                          |  | Im 1. Schritt wird die Quelle ausgewählt. Mit <b>Next</b> weiter. |

| 3              |  <p>VMware Converter Import Wizard</p> <p><b>Source Type</b><br/>What do you want to import?</p> <p>Step 1: Source<br/>Source Type<br/>Virtual Machine<br/>Source Data<br/>Step 2: Destination<br/>Step 3: Customization<br/>Ready to Complete</p> <p>Source:</p> <ul style="list-style-type: none"><li><input type="radio"/> <b>Physical computer</b><br/>Create a virtual machine from any computer on your network.</li><li><input type="radio"/> <b>ESX server or VirtualCenter virtual machine</b><br/>A virtual machine from VMware ESX Server or VMware VirtualCenter.</li><li><input checked="" type="radio"/> <b>Standalone virtual machine, backup or disk image</b><br/>A VMware Workstation virtual machine, 3rd party virtual machine, VMware Consolidated Backup (VCB), or 3rd party disk image.</li></ul> <p>Log Info &gt;&gt;</p> <p>Help &lt; Back Next &gt; Cancel</p> | Wir haben ein Disk Image... |       |                |              |                                                         |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------|----------------|--------------|---------------------------------------------------------|
| 4              |  <p>VMware Converter Import Wizard</p> <p><b>Select Virtual Machine</b><br/>Browse to the virtual machine or image you wish to import.</p> <p>Step 1: Source<br/>Source Type<br/>Virtual Machine<br/>Source Data<br/>Step 2: Destination<br/>Step 3: Customization<br/>Ready to Complete</p> <p>Source VM or image:<br/>\\Juno\images\LapArmada\funk-5.tb Browse...</p> <p>Log Info &gt;&gt;</p> <p>Help &lt; Back Next &gt; Cancel</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                 | wählen es aus...            |       |                |              |                                                         |
| 5              |  <p>VMware Converter Import Wizard</p> <p><b>Hotfix Files for Reconfiguration</b><br/>Some files are needed in order to reconfigure your new virtual machine.</p> <p>Step 1: Source<br/>Source Type<br/>Virtual Machine<br/>Hotfix Files<br/>Source Data<br/>Step 2: Destination<br/>Step 3: Customization<br/>Ready to Complete</p> <p>The following files must be installed on the new virtual machine. The system cannot locate the items that do not have a check mark next to them. Specify the location of any unchecked item below:</p> <table><tr><th>File</th><th>Title</th></tr><tr><td>✓ scsiport.sys</td><td>scsiport.sys</td></tr></table> <p>Have Disk...</p> <p>Log Info &gt;&gt;</p> <p>Help &lt; Back Next &gt; Cancel</p>                                                                                                                                            | File                        | Title | ✓ scsiport.sys | scsiport.sys | ...Treiber müssen angepasst werden.<br>Mit Next weiter. |
| File           | Title                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                             |       |                |              |                                                         |
| ✓ scsiport.sys | scsiport.sys                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                             |       |                |              |                                                         |

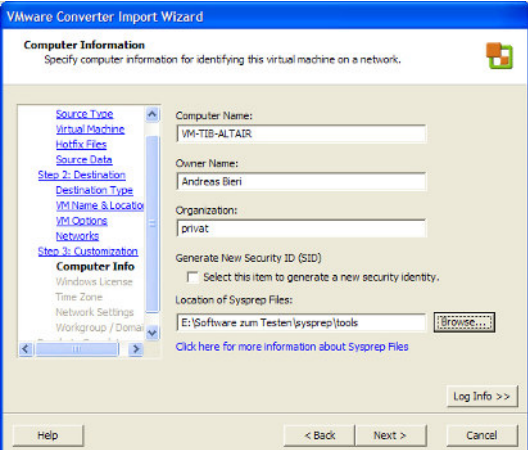
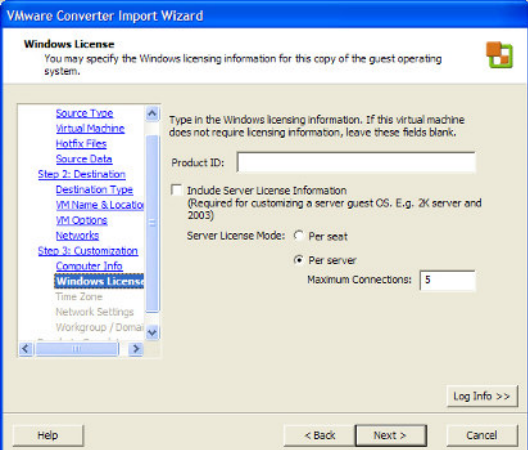
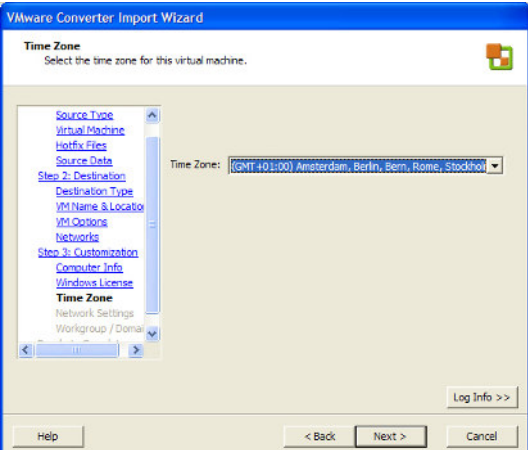
| 6                                   |  <p>VMware Converter Import Wizard</p> <p><b>Source Data</b><br/>Choose the disks to import and specify their size.</p> <p>Step 1: Source<br/><a href="#">Source Type</a><br/><a href="#">Virtual Machine</a><br/><a href="#">Hotfix Files</a><br/><b>Source Data</b><br/>Step 2: Destination<br/>Step 3: Customization<br/>Ready to Complete</p> <p><input checked="" type="radio"/> Import all disks and maintain size.<br/><input type="radio"/> Select volumes and resize to save or add space.<br/>You may choose from the menu or type in a size (in GB or MB)</p> <table><tr><th>Disk(s)</th><th>Total Size</th></tr><tr><td>Disk0</td><td>18.64 GB</td></tr></table> <p>Log Info &gt;&gt;</p> <p>Help &lt; Back Next &gt; Cancel</p>                                                                                                                                                                                                                                                                                                                                                                            | Disk(s)                       | Total Size | Disk0              | 18.64 GB | Wir wählen die ganze Festplatte aus. |                                     |       |          |          |                    |                                                           |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------|--------------------|----------|--------------------------------------|-------------------------------------|-------|----------|----------|--------------------|-----------------------------------------------------------|
| Disk(s)                             | Total Size                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               |            |                    |          |                                      |                                     |       |          |          |                    |                                                           |
| Disk0                               | 18.64 GB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                               |            |                    |          |                                      |                                     |       |          |          |                    |                                                           |
| 7                                   |  <p>VMware Converter Import Wizard</p> <p><b>Source Data</b><br/>Choose the disks to import and specify their size.</p> <p>Step 1: Source<br/><a href="#">Source Type</a><br/><a href="#">Virtual Machine</a><br/><a href="#">Hotfix Files</a><br/><b>Source Data</b><br/>Step 2: Destination<br/>Step 3: Customization<br/>Ready to Complete</p> <p><input type="radio"/> Import all disks and maintain size.<br/><input checked="" type="radio"/> Select volumes and resize to save or add space.<br/>You may choose from the menu or type in a size (in GB or MB)</p> <table><tr><th>Volume</th><th>Disk(s)</th><th>Total...</th><th>Used</th><th>New Disk Space</th></tr><tr><td><input checked="" type="checkbox"/></td><td>Disk0</td><td>18.64...</td><td>7.01 ...</td><td>Min size (7.71 GB)</td></tr></table> <p><input checked="" type="checkbox"/> Ignore page file and hibernation file</p> <p>System Active System(Active) Unknown</p> <p>You need to select at least one system/active volume to be able to boot the virtual machine.</p> <p>Log Info &gt;&gt;</p> <p>Help &lt; Back Next &gt; Cancel</p> | Volume                        | Disk(s)    | Total...           | Used     | New Disk Space                       | <input checked="" type="checkbox"/> | Disk0 | 18.64... | 7.01 ... | Min size (7.71 GB) | Man könnte auch Teile auswählen und ihre Grösse anpassen. |
| Volume                              | Disk(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Total...                      | Used       | New Disk Space     |          |                                      |                                     |       |          |          |                    |                                                           |
| <input checked="" type="checkbox"/> | Disk0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 18.64...                      | 7.01 ...   | Min size (7.71 GB) |          |                                      |                                     |       |          |          |                    |                                                           |
| 8                                   |  <p>VMware Converter Import Wizard</p> <p><b>Destination</b><br/>Where do you want to put the new virtual machine?</p> <p>Step 1: Source<br/><a href="#">Source Type</a><br/><a href="#">Virtual Machine</a><br/><a href="#">Hotfix Files</a><br/><a href="#">Source Data</a><br/><b>Step 2: Destination</b><br/>Step 3: Customization<br/>Ready to Complete</p> <p>Destination</p> <p>Step 2: Choose a destination for the new virtual machine</p> <p>Log Info &gt;&gt;</p> <p>Help &lt; Back Next &gt; Cancel</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2. Schritt: Auswahl des Ziels |            |                    |          |                                      |                                     |       |          |          |                    |                                                           |

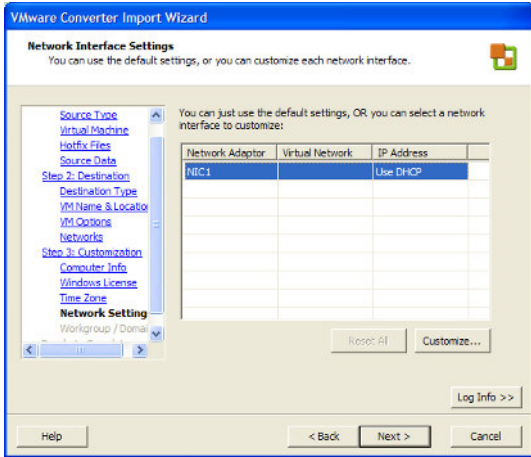
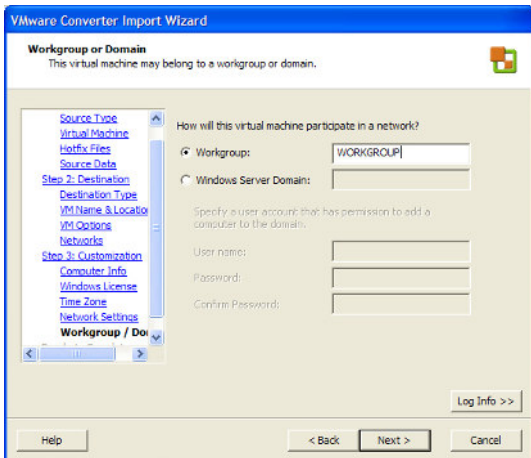
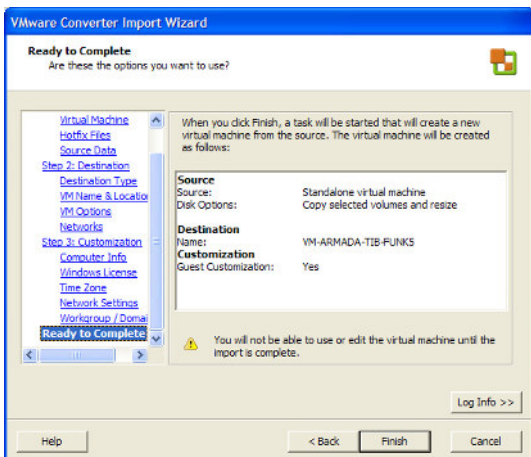
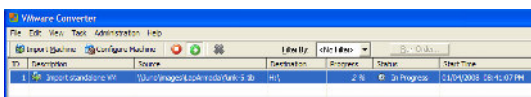
|    |                                                                                     |                                                                                                   |
|----|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| 9  |    | Option 2 für Vmware Server und andere.                                                            |
| 10 |   | Name, Speicherort und Typ angeben.                                                                |
| 11 |  | Mit Create full clone erhalten wir eine komplett getrennte VM. Wir lassen sie bei Bedarf wachsen. |



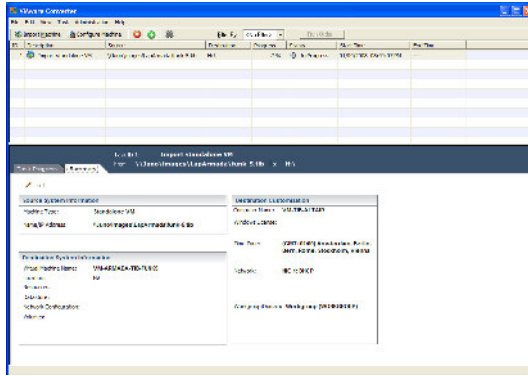
|    |                                                                                     |                                                                                                                                                        |
|----|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12 |    | Die Netzwerkkarten werden durch virtuelle ersetzt.                                                                                                     |
| 13 |   | Wir wollen die VM noch umbenennen.                                                                                                                     |
| 14 |  | Mit dem Microsoft-Werkzeug Sysprep kann der neuen VM einen eigene Identität gegeben (Security Identifier) werden. Es drohen sonst Problem im Netzwerk. |
| 15 |  | Wir geben neue Angaben ein, verzichten hier aber der Kürze wegen darauf, Sysprep zu verwenden und einen neuen Security Identifier zu generieren.       |



|    |                                                                                     |                                                                                                                                        |
|----|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| 16 |    | Die Sysprep-Dateien müssen aber da sein.                                                                                               |
| 17 |   | Falls ein neuer Security Identifier erzeugt würde, müsste hier ein neuer Lizenzschlüssel eingegeben werden. Wir gehen mit Next weiter. |
| 18 |  | Zeitzone                                                                                                                               |

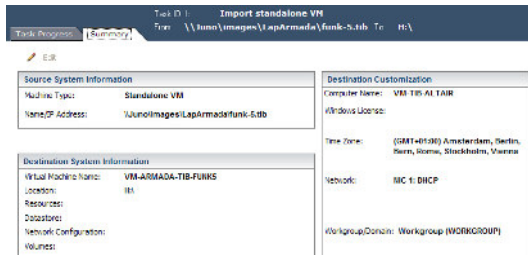
|    |                                                                                     |                                                      |
|----|-------------------------------------------------------------------------------------|------------------------------------------------------|
| 19 |    | Das Netzwerk kann nochmal angepasst werden.          |
| 20 |   | Die VM wird Mitglied der Workgroup WORKGROUP werden. |
| 21 |  | Zusammenfassung                                      |
| 22 |  | Start                                                |
| 23 |  | der Fortschritt wird protokolliert.                  |

24



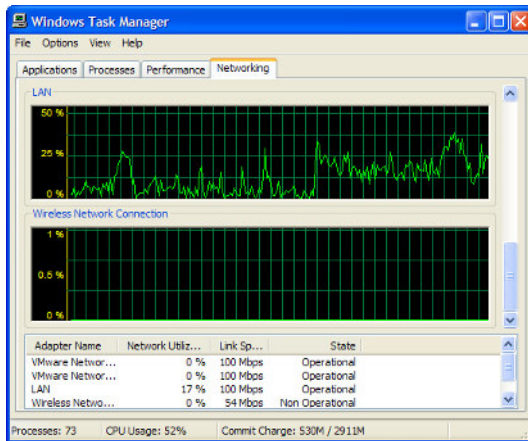
Hier der gesamte Bildschirm.

25



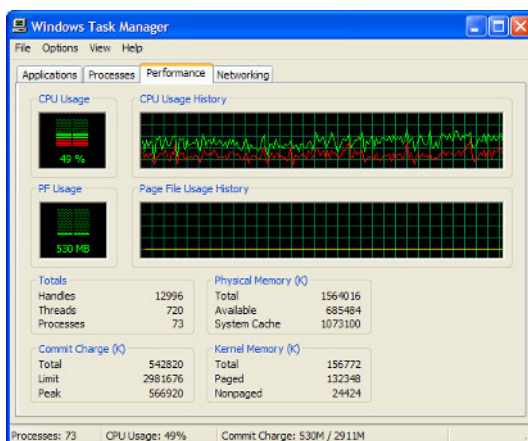
Zusammenfassende Angaben

26



Der Prozess ist sehr netzwerklastig

27

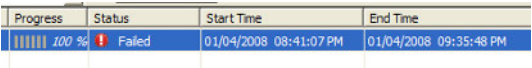
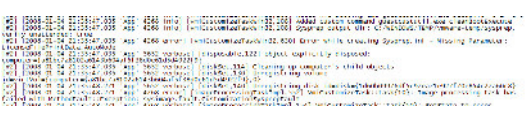


und rechenintensiv.

28

| <No Filter> Run Order... |             |                        |                   |
|--------------------------|-------------|------------------------|-------------------|
| Progress                 | Status      | Start Time             | End Time          |
| 19 %                     | In Progress | 01/04/2008 08:41:07 PM | 39 mins remaining |

Es kann Stunden dauern.

|    |                                                                                   |                                                                                                  |
|----|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| 29 |  | Der Import endet mit einem Fehler. Ein Blick auf die Logdatei...                                 |
| 30 |  | zeigt, dass der fehlende Lizenzschlüssel die Ursache ist. Das erzeugte VM läuft jedoch tadellos. |

Beim Start der importierten VM werden eine ganze Menge Treiber gegen die VMware-eigenen ausgetauscht (20 Stück können es schon sein). Nach etlichen Neustarts ist alles angepasst und die VM kann benützt werden.