



# TSM bei Plansee

Bernd Lumpert



# Agenda

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- Wer oder was ist Plansee ?
- IT – in Reutte
- TSM Installationen
- Probleme
- Nützliche Tools
- Vorschau



# Der Plansee



## Die Firma Plansee wurde 1921 gegründet



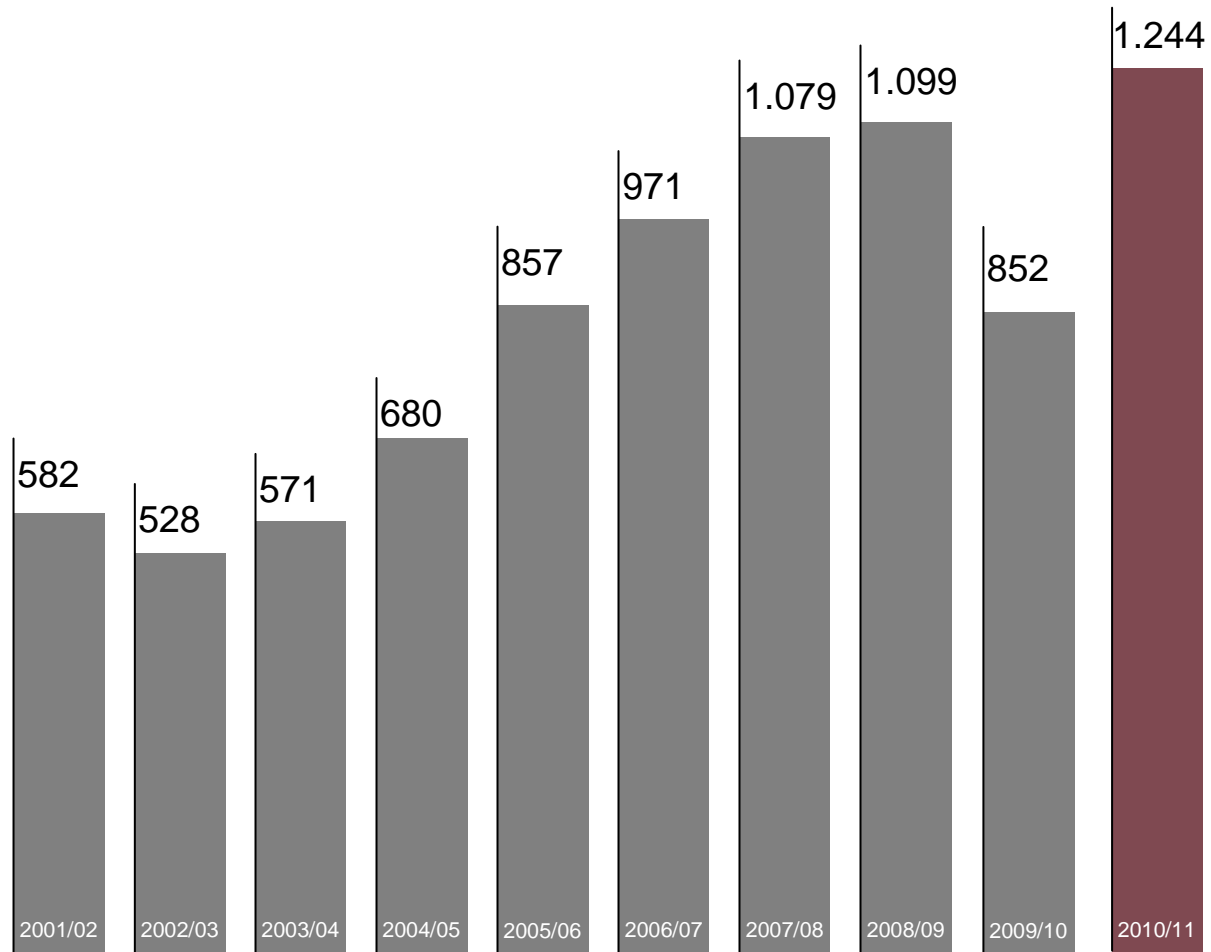


# Heuer 90 jähriges Bestehen der Firma

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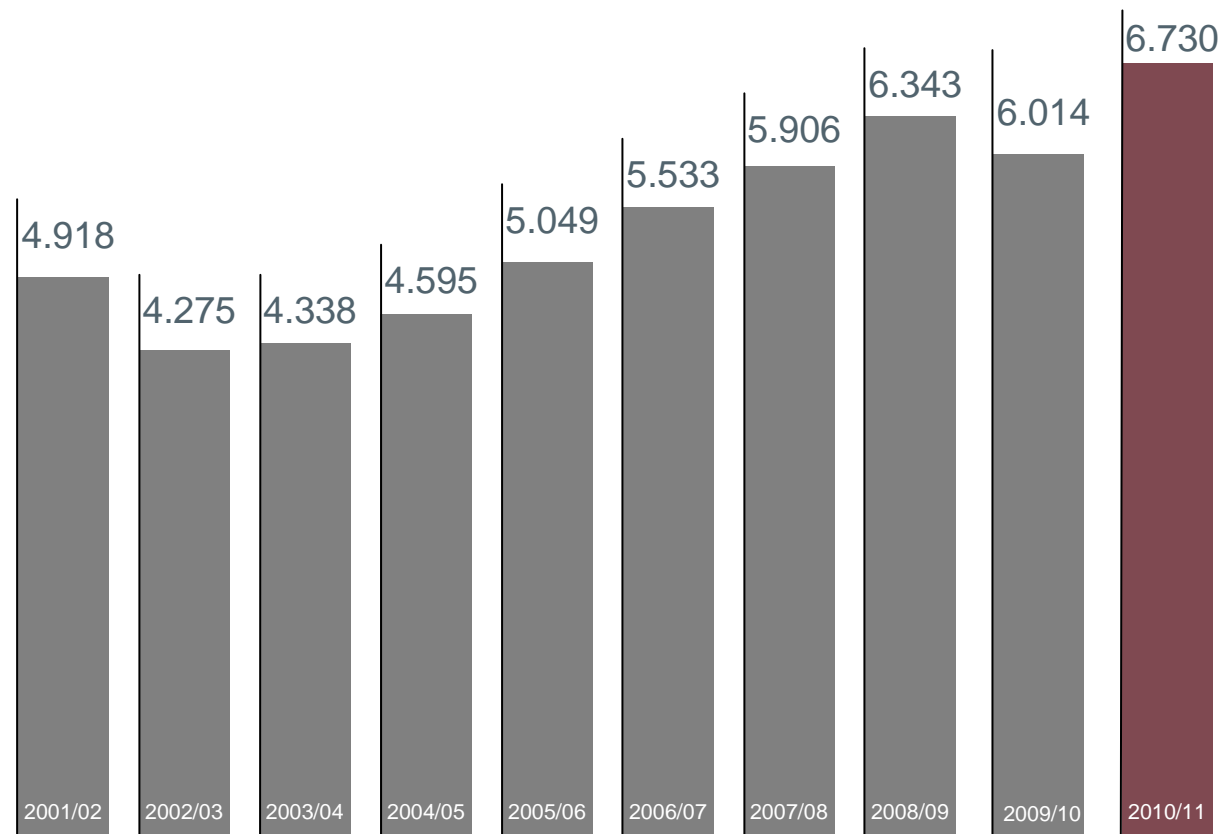


## Plansee Group - Umsatzentwicklung in Millionen €



## Plansee Group – Anzahl Mitarbeiter

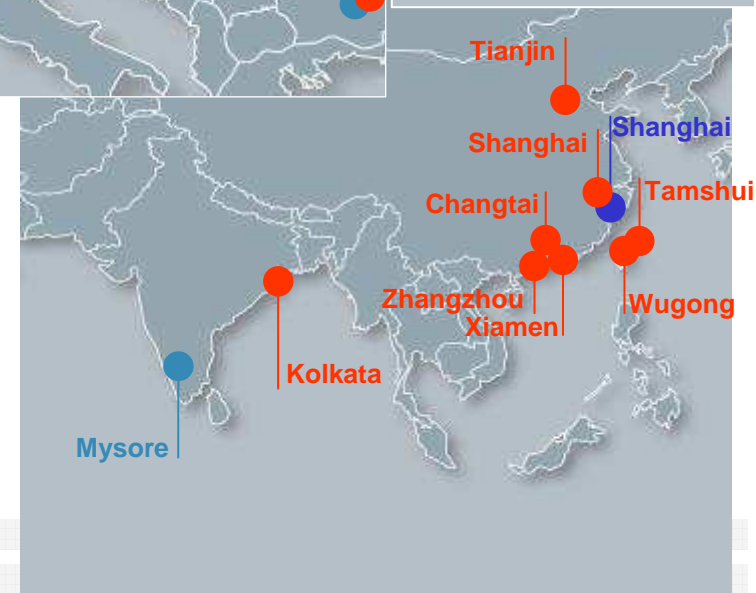
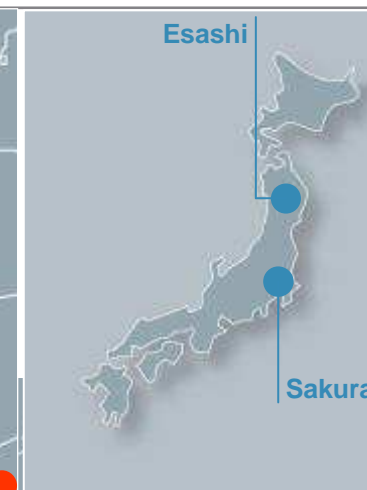
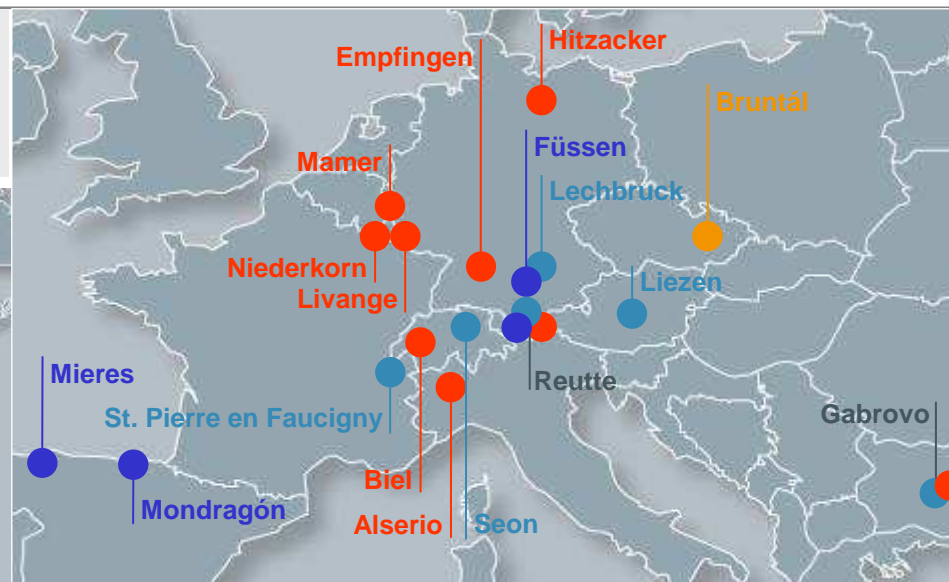
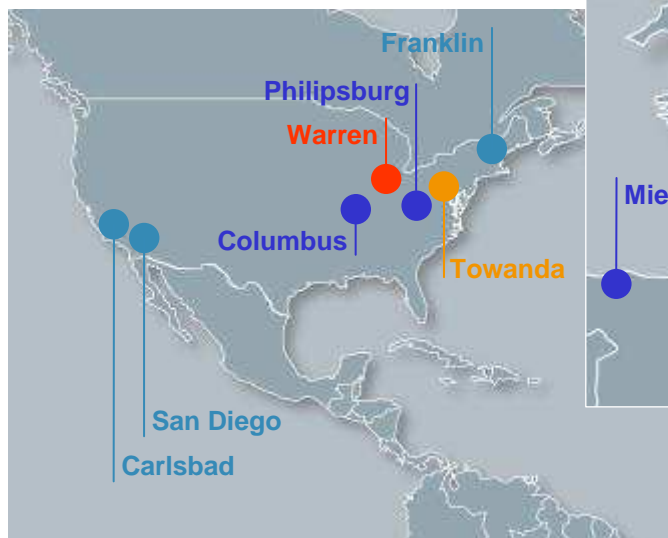
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# 36 Produktionsstandorte weltweit

Vertriebsniederlassungen und Vertriebspartner in 50 Ländern



**PLANSEE** High Performance Materials

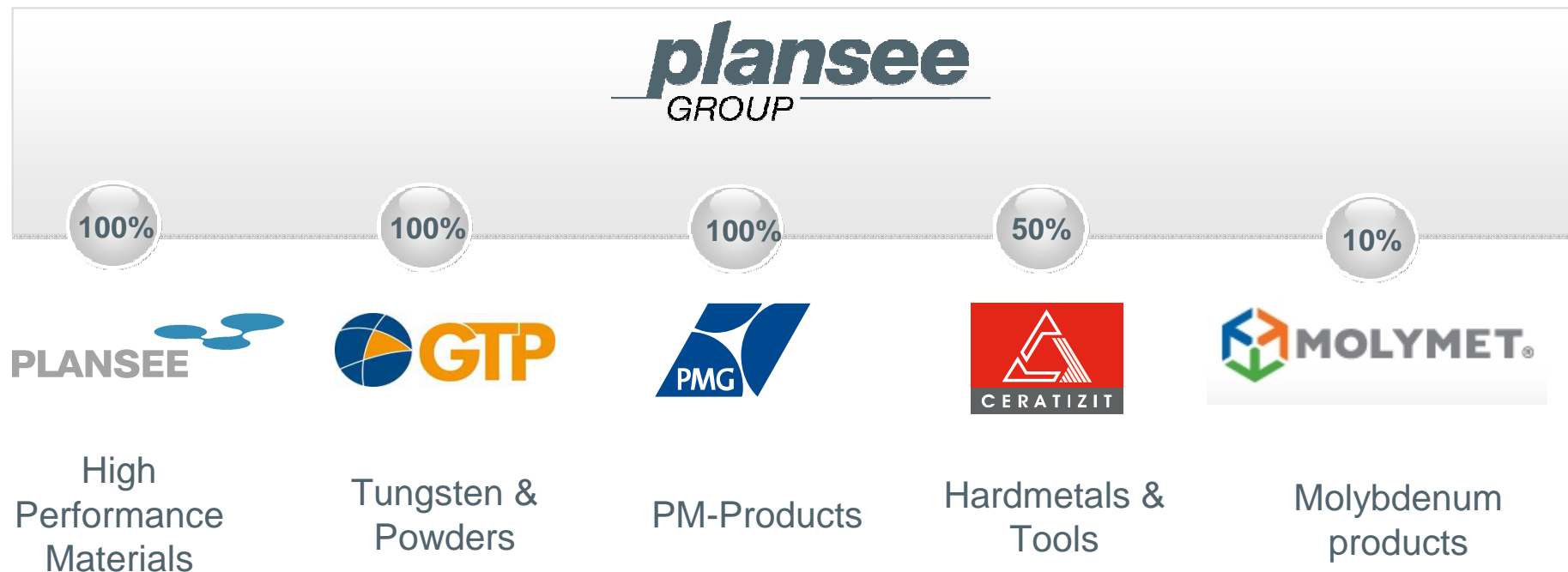
**CERATIZIT** Hardmetals & Tools

**GTP** Tungsten & Powders

**PMG** PM-Products



# Plansee Group Organisation



# Unsere Core Kompetenz: Materialien

## High-technology materials

*Molybdän*

*Wolfram*

Molybdän	✓	✓	✓	
Wolfram		✓	✓	✓



# Unsere Märkte

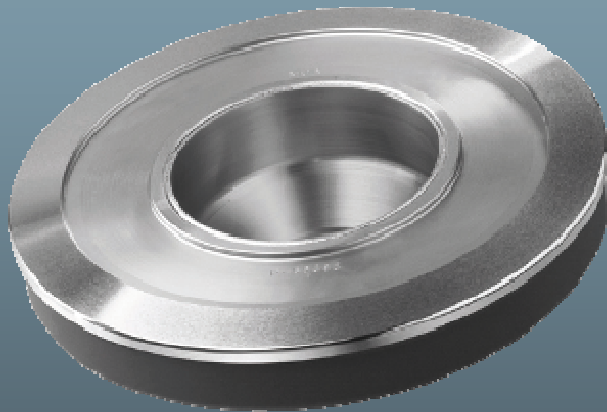
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Maschinenbau	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Unterhaltungselektronik	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Medizintechnik	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Energietechnik	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Bauindustrie			<input checked="" type="checkbox"/>	
Luft- und Raumfahrt	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Halbleitertechnologie	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

## Produkte: z.B. Medizintechnik

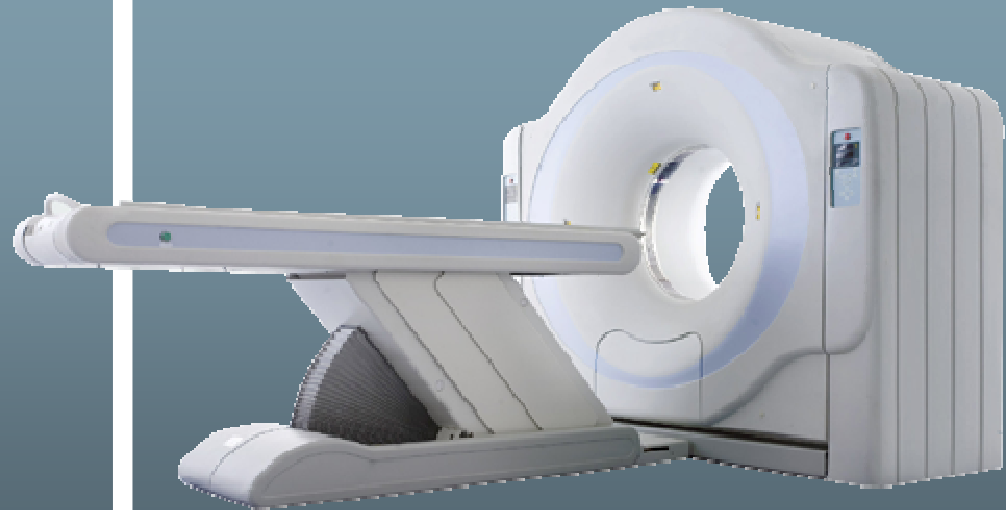
Produkt



Anwendung




Drehanode



Computertomograph



# Energietechnik

Produkt ▶	Komponente ▶	Anwendung
 <p data-bbox="275 1209 770 1251">Sputter targets für Solarzellen</p>	 <p data-bbox="938 1209 1319 1251">Dünnschicht Solarzelle</p>	 <p data-bbox="1509 1209 1957 1251">Solarmodule in Bauwerken</p>

# Automobilindustrie

## Komponenten



Kettenräder



Freiläufe



Führungs-  
muffen



Variable valve  
timing (VVT)

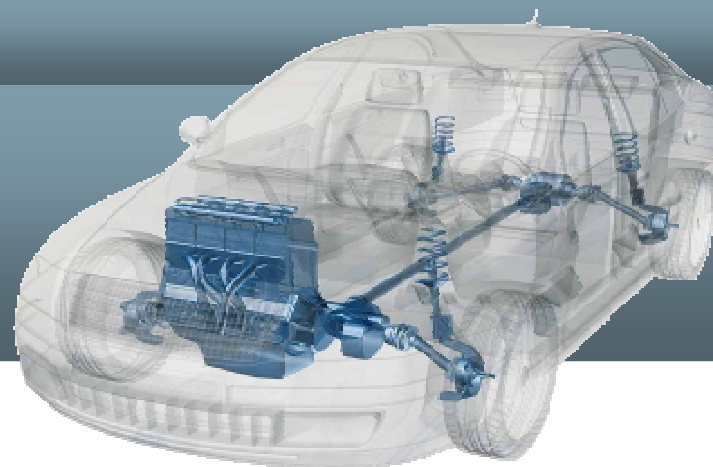


Planeten-träger



Stoßdämpfer

## Produkt





# Werkzeuge für die Industrie

Werkzeug ▶



Hygienewalze

Endprodukt



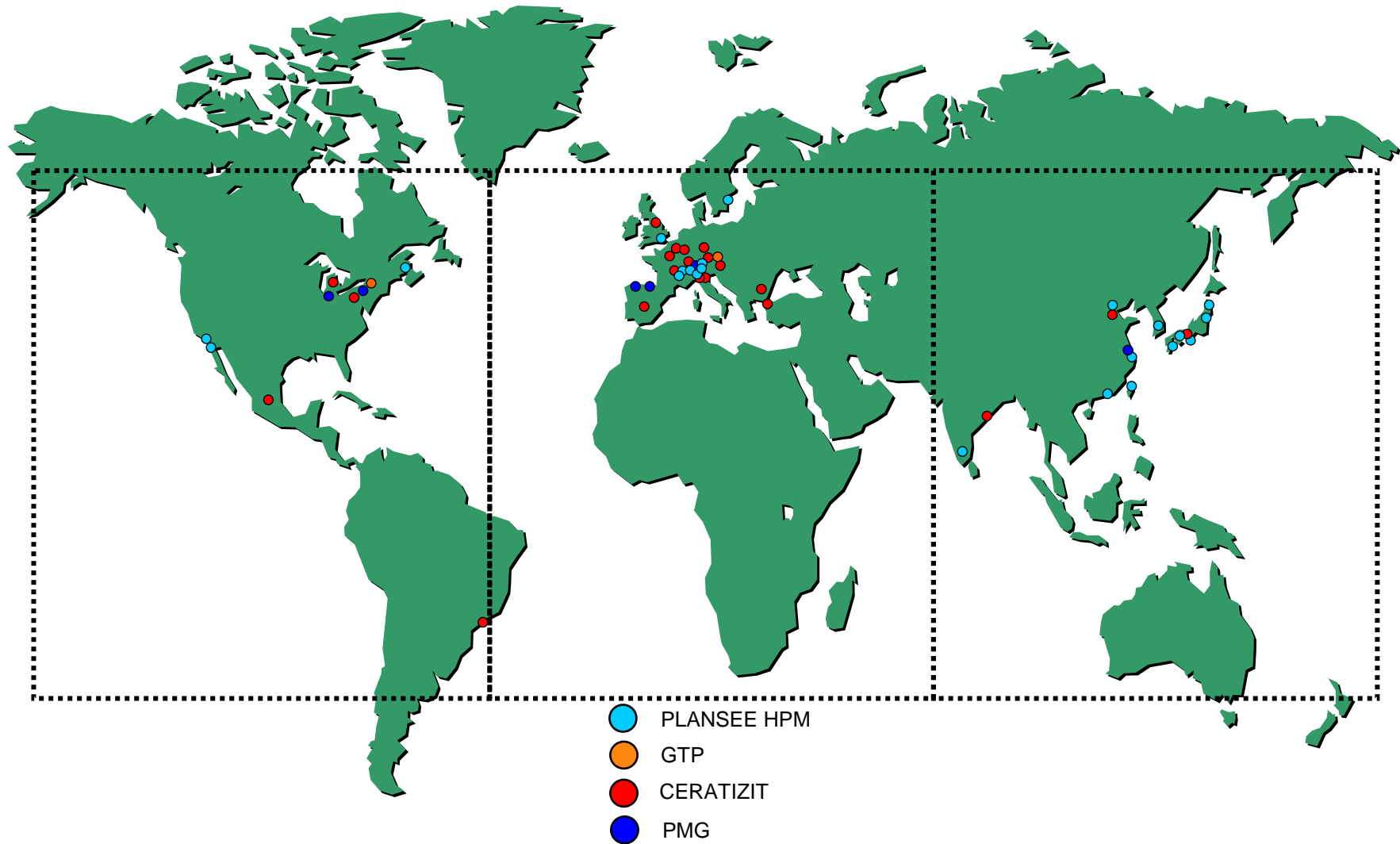
Windel

## Plansee IT in Reutte

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- ITA – Application ( 28 )
  - Anwendungsentwicklung
  - Organisatoren, Applikationsentwickler
  
- ITC – Customer-Center ( 12 )
  - Laptop, PC, Hard-, Software, Smartphones
  - Helpdesk
  
- ITI – Infrastructure ( 16 )
  - SAP-Basis, DB2, Storage, SAN, TSM, AIX, VMWARE, Linux, Apache...
  - Windows
  - Netz, Firewall
  - Benutzerverwaltung, Operating

# Lokationen Weltweit



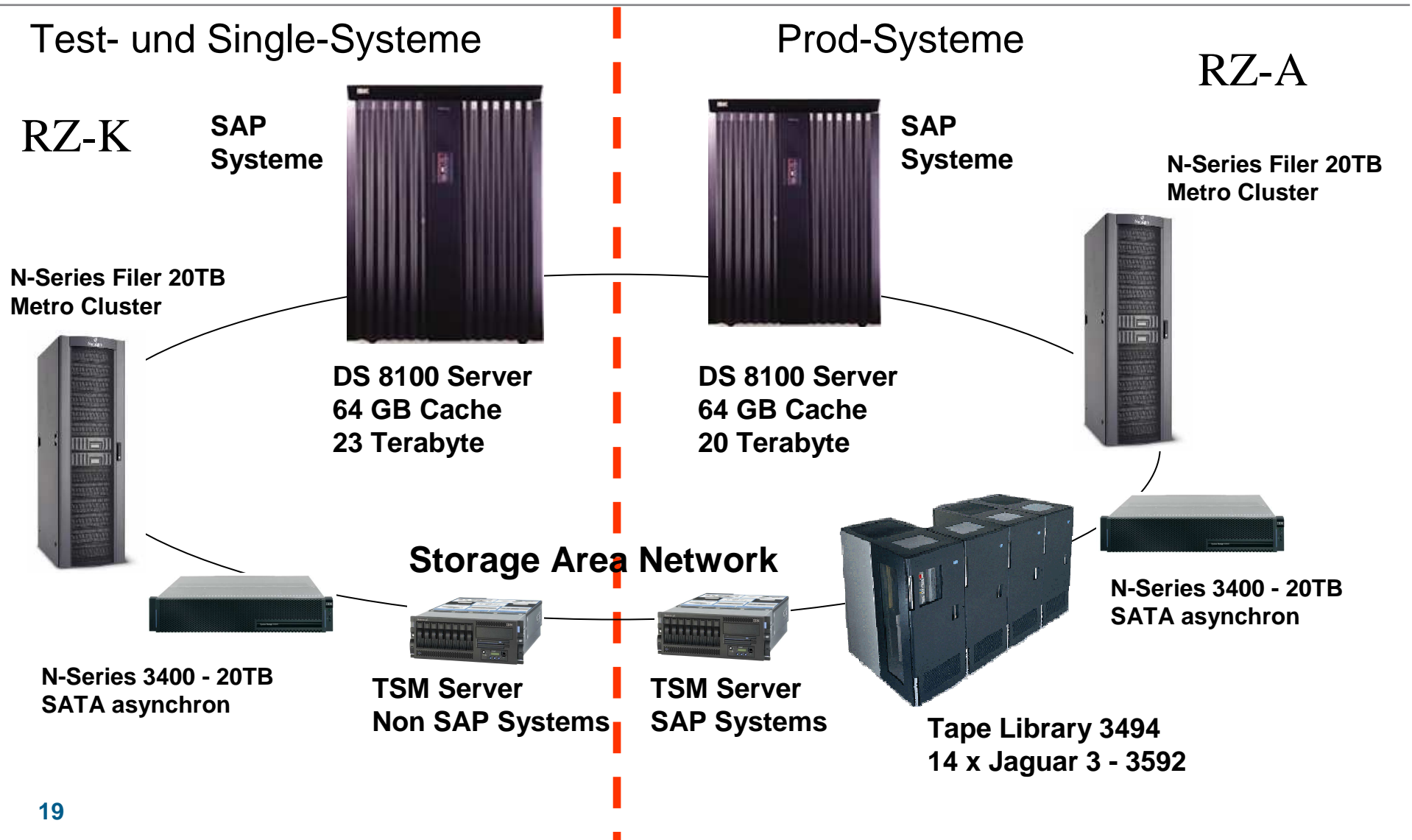


## 3 TSM Konzepte

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- Standort Reutte:
  - Netzwerktrennung
  - Zwei TSM Server, die logisch und physisch ( RZ ) getrennt sind
    - Ein Server für die SAP-Systeme
    - Ein Server für Non-SAP-Systeme
    - Eine Tapelibrary – keine Auslagerung
  
- Hubs ( Amerika und Asien )
  - Zwei TSM Server, die physisch ( RZ ) getrennt sind
    - Datenspiegelung durch Stagesubsystem
    - Pro TSM Server eine Tapelibrary
    - Amerika Auslagerung – Asien keine Auslagerung
  
- Kleinere Standorte
  - Ein TSM Server
  - Eine Tapelibrary mit Auslagerung
    - Export Server ( Konfiguration geht mit )

# Plansee Storageumgebung in Reutte



## Standort Reutte - 2 TSM Server

- Hardware:
  - IBM Type: 9131 52A
  - 2 CPU's
  - 8 GB Memory
  
- OS: AIX 6.1 TL 06 SP 04
  
- Server V 5 Release 5 Level 5.2
  - DB 50/40 GB Log 12/8 GB
  
- Ausfall eines Rechenzentrums:
  - Server sind manuell jeweils auf der anderen Hardware ( ist natürlich im 2. RZ ) zu starten ( kein HACMP )





## TSM Server für SAP-Systeme ( in Reutte )

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- 6 Tapestationen
- SAP- Systeme mittels TDP/R3 V6.2.0.0
  - Datenbanken
  - Logfiles
- SAP- Umgebung mittels Backup/Archive Client
- andere Server mittels Backup/Archive Client
  - CW's, NIM-Server, ...
- 24 SAP – Systeme
  - DB2 DB's von 30 GB bis 1.7 TB ( full compressed – ca. Faktor 2 )
- Zuständigkeit: Reutte

## TSM Server für NON-SAP-Systeme ( in Reutte )

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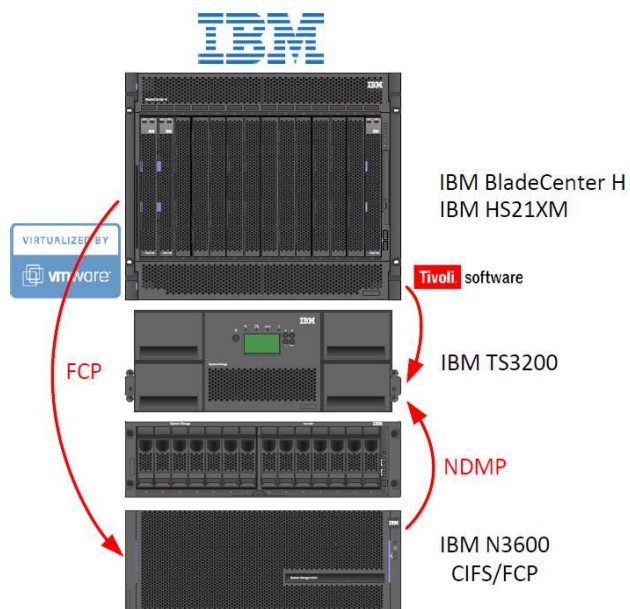
- 8 Tapestationen
- Exchange Server mittels IBM Storage Manager for Mail
  - TDP for Microsoft Exchange Server V 6.1.3.1
  - Datenbank ca. 1,2 TB und Logfiles
- N-Series Filer mittels NDMP ( Network Data MGM Protokoll )
  - Pro Volume wird nur 1 File direkt von der NetApp auf Tape geschrieben
  - am Ende der Sicherung wird noch ein Table of Content geschrieben
  - dadurch kann man auch einzelne Files Restoren
- Server mittels Backup/Archive Client
- Zuständigkeit: Reutte

# Asia Hub Storageumgebung

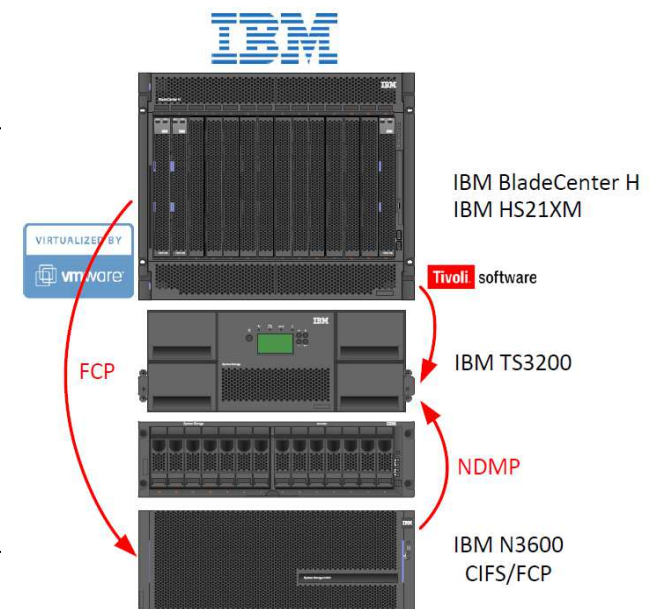
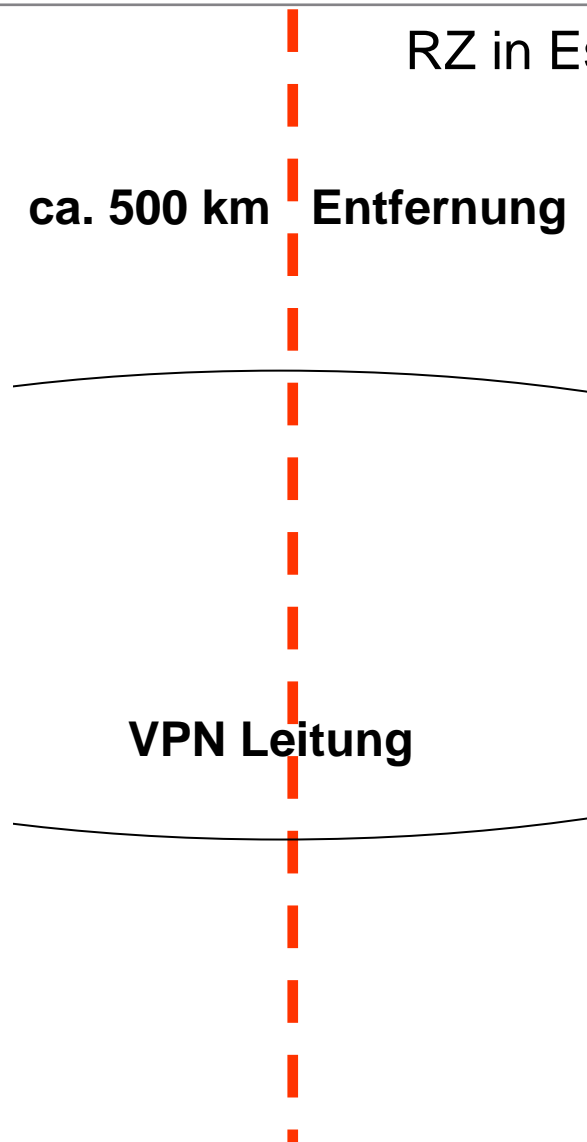
RZ in Tokyo

RZ in Esashi

ca. 500 km Entfernung



**N-Series mit ca. 5TB**



**N-Series mit ca. 5TB**



## Asia Hub 2 TSM Server

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- Hardware:
  - Bladecenter H - Blade HS21
  - 1 Intel Xeon E5420 Quadcore CPU
  - 4 GB Memory
  
- OS: Windows Server 2003
  
- Server V 5 Release 5 Level 1.0
  - DB 5 GB Log 2 GB
  
- Ausfall eines Rechenzentrums:
  - Daten sind gespiegelt und auf beiden TSM-Servern gesichert



## TSM Server Asia Hub

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- eine Tapelibrary
- mit zwei Tapelaufwerken
  - 48 LTO-4 Tapes
- N-Series Filer mittels NDMP
  - Pro Volume wird nur 1 File direkt von der NetApp auf Band geschrieben
  - am Ende der Sicherung wird noch ein Table of Content geschrieben
  - dadurch kann man auch einzelne Files Restoren
- Server mittels Backup/Archive Client
- Zuständigkeit: Reutte + Mitarbeiter vom Asia Hub

# Storageumgebung Kleinere Standorte



**Interne SAS-Platten mit ca. 5TB**

## Kleinere Standorte 1 TSM Server

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- Hardware:
  - Bladecenter S - Blade HS22
  - 1 Intel Xeon E5620 Quadcore CPU
  - 8 GB Memory
  
- OS: Windows Server 2008 R2
  
- Server V 6 Release 2 Level 2.0
  - DB 20 GB Log 9 GB
  
- Ausfall eines Rechenzentrums:
  - TSM-Server von Auslagerung wieder herstellen





## TSM Server Kleinere Standorte

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- eine Tapelibrary
- mit einem Tapelaufwerk
  - 8 LTO-4/5 Tapes
- Server mittels Backup/Archive Client
- Zuständigkeit: Reutte + Key-User am Standort ( Auslagerung )

## Probleme:

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- Dauer des Exchange Backups
  - Organisatorisch:
    - 18 DB's + 17 Archive – verkleinern ?
    - Netz: Firewall dazwischen
  - Andere Lösung ?
- Allgemein gilt: kleine Mannschaft -> **KIS** ( keep it simple )
  - SAP nur zwei Kriterien Prod und Test
    - Deshalb nur je 3 Mgmt.-Klassen DB, Logs, Files
  - Filer auch nur zwei Kriterien High ( Fiber ) oder Low Storage ( Sata )
    - Auch nur wenige Mgmt.-Klassen

## Nützliche Programme für den TSM

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- Storage Manager for Enterprise Resource Planning
- Data Protection for SAP - **Administration Assistant**
  
- Voraussetzung: TDP/R3
- Lizenz: kostenlos
  - Alle SAP-Systeme auf einen Blick
    - System Status, Letzte Sicherung, Zeit seit letzter Sicherung ...
  - Es können bei der Anzeige Filter gesetzt werden
  - E-Mail Support:
    - z.B.: falls für eine bestimmte Zeitperiode keine erfolgreiche
    - Sicherung – dann wird ein E-Mail verschickt
  - Man kann Sicherungen “ nachfahren “

# Administration Assistant

## Monitor Backup States

Number of systems currently monitored: 37

Adm.Assist.Server GMT-Offset: 1

Failure 1

Warning/Connection Loss 0

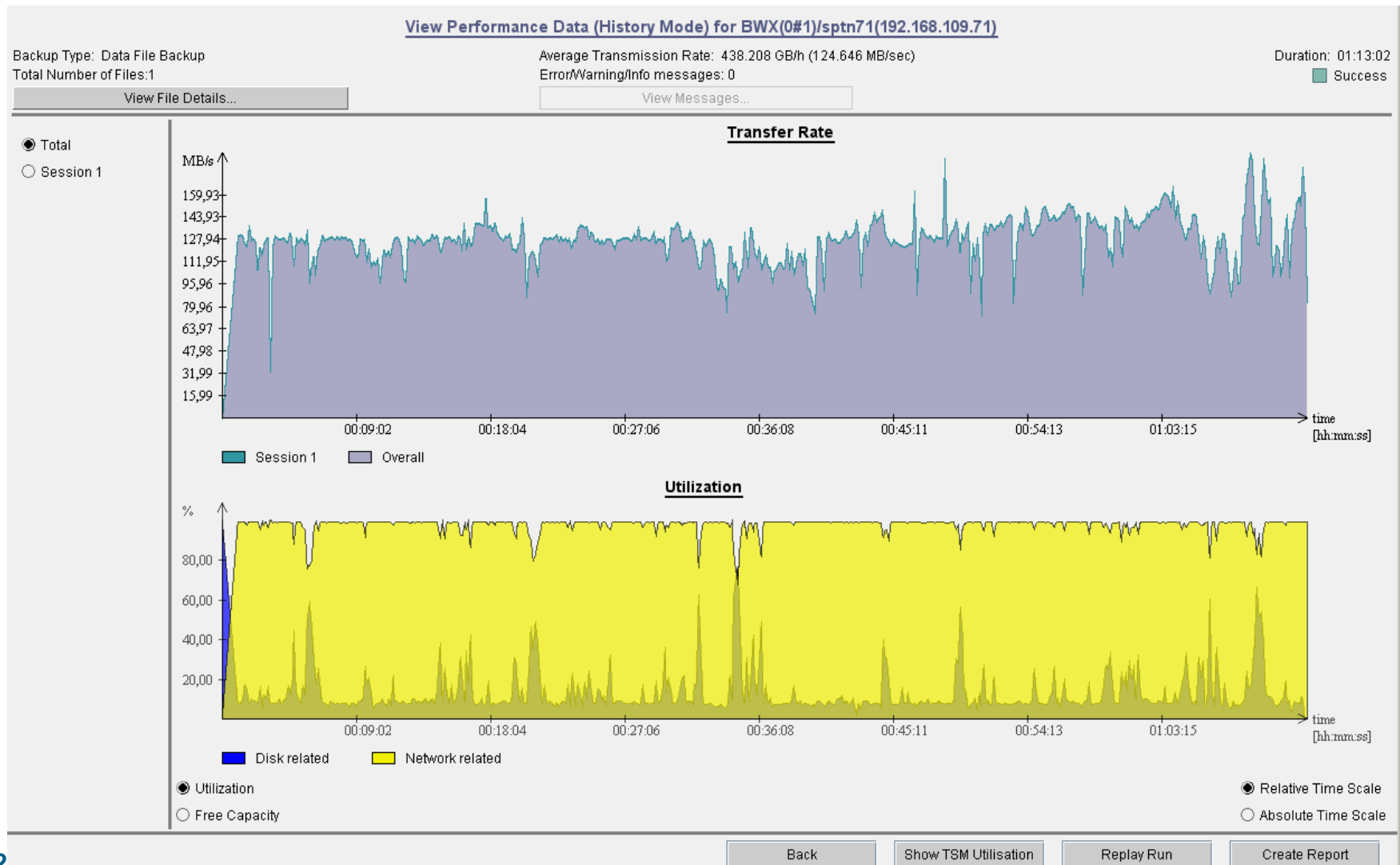
Success 22

N/A 14

System Status	Threshold sta	System ID	Host	Connection Status	Type	Date of TSM Ba	Time of TSM Backup	Current TSM Ba	Redo-log size	Recovery Point O	Period since full ba	
<no filter>	<no filter>	<no filter>	<no filter>	<no filter>	<no filter>	<no filter>	<no filter>	<no filter>	<no filter>	<no filter>	<no filter>	<
Success	enabled	AEP	1 host(s)	Connected	Partitioned(1)	30.10.2011	01:13:18	Success	1,50 GB	01:50:48	3 day(s) 2 hrs	1
Success	enabled	AET	1 host(s)	Connected	Partitioned(1)	30.10.2011	01:03:54	Success	511,94 MB	05:54:27	3 day(s) 2 hrs	1
Success	enabled	BWE	1 host(s)	Connected	Partitioned(1)	28.10.2011	23:05:51	Success	3,25 GB	00:50:31	4 day(s) 4 hrs	1
Success	enabled	BWP	1 host(s)	Connected	Partitioned(1)	02.11.2011	01:10:16	Running 1...	23,70 GB	04:34:35	23:02:51	1
Success	enabled	BWX	1 host(s)	Connected	Partitioned(1)	29.10.2011	13:15:18	Success	767,85 MB	15:48:36	3 day(s) 14 hrs	1
Success	enabled	MIE	1 host(s)	Connected	Partitioned(1)	29.10.2011	21:02:56	Success	N/A	3 day(s) 6 hrs	3 day(s) 6 hrs	1
Success	enabled	MIP	1 host(s)	Connected	Partitioned(1)	29.10.2011	05:05:12	Success	767,84 MB	05:33:47	3 day(s) 22 hrs	1
Success	enabled	PHP	1 host(s)	Connected	Partitioned(1)	30.10.2011	02:10:17	Success	1023,78 MB	08:10:37	3 day(s) 0 hrs	1
Success	enabled	PIE	1 host(s)	Connected	Partitioned(1)	30.10.2011	19:07:42	Success	1023,79 MB	04:41:24	2 day(s) 7 hrs	1
Success	enabled	PIP	1 host(s)	Connected	Partitioned(1)	30.10.2011	03:13:31	Success	2,25 GB	04:45:47	2 day(s) 23 hrs	1
Success	enabled	PJE	1 host(s)	Connected	Partitioned(1)	30.10.2011	19:08:46	Success	2,62 GB	01:50:33	2 day(s) 7 hrs	1
Success	enabled	PSE	1 host(s)	Connected	Partitioned(1)	30.10.2011	21:17:46	Success	3,12 GB	01:09:56	2 day(s) 5 hrs	1
Success	enabled	PSP	1 host(s)	Connected	Partitioned(1)	02.11.2011	01:10:26	Running 1...	17,00 GB	00:10:07	23:01:10	1
Success	enabled	PSQ	1 host(s)	Connected	Partitioned(1)	29.10.2011	22:22:10	Success	4,50 GB	00:30:01	3 day(s) 5 hrs	1
Success	enabled	PST	1 host(s)	Connected	Partitioned(1)	30.10.2011	16:09:02	Success	511,89 MB	21:18:40	2 day(s) 10 hrs	1
Success	enabled	PSX	1 host(s)	Connected	Partitioned(1)	30.10.2011	10:20:40	Success	1023,78 MB	1 day(s) 0 hrs	2 day(s) 16 hrs	1
Success	enabled	SCE	1 host(s)	Connected	Partitioned(1)	29.10.2011	22:05:43	Success	1,06 GB	04:53:42	3 day(s) 5 hrs	1
Success	enabled	SCP	1 host(s)	Connected	Partitioned(1)	01.11.2011	05:04:02	Success	332,20 MB	03:57:21	21:46:44	1
Success	enabled	SMP	1 host(s)	Connected	Partitioned(1)	29.10.2011	19:42:31	Success	1023,79 MB	19:51:23	3 day(s) 8 hrs	1
Success	enabled	TSE	1 host(s)	Connected	Partitioned(1)	30.10.2011	04:13:44	Success	2,00 GB	17:50:00	2 day(s) 22 hrs	1
Success	enabled	TSP	1 host(s)	Connected	Partitioned(1)	29.10.2011	03:24:40	Success	2,50 GB	04:26:28	4 day(s) 0 hrs	1
Success	enabled	WAE	1 host(s)	Connected	Partitioned(1)	28.10.2011	21:09:20	Success	255,96 MB	2 day(s) 1 hrs	4 day(s) 6 hrs	1
Failure	enabled	WAP	1 host(s)	Connected	Partitioned(1)	01.11.2011	23:05:44	Success	191,81 MB	03:44:58	03:45:03	1



# Administration Assistant



## Nützliche Programme für den TSM

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- TSMManager – kein IBM Produkt
- Voraussetzung: Windows ( Server – Client )
- Lizenz: ( eine Lizenz pro TSM-Server + jährlicher Wartung )
  - Graphisches Tool zum TSM
    - Alerts auf einen Blick
    - Befehle lassen sich per Maus-Click ausführen
    - Viele vorgefertigte Reports
    - Filter können gesetzt werden
    - E-Mail Support
      - täglicher Summary Report
      - Wichtige Server ( Exchange ) sofortige Mail an Verantwortlichen


# TSMManager

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- Auszug vom täglichen Summary Report:
  - The following client schedules have not completed
  - Backups with failed files
  - The following filespace have not completed their backup within the last 3 days
  - The following clients have no associated schedule
  - The following volumes are less than 25 % utilized. (Is reclaim working ?)
  - Summary of client activity for the last 24 hours
  - Summary of NAS backups for the last 24 hours
  - Summary of TDP activity for the last 24 hours
  - Storage pool summary
  - Messages for the last 24 hours

# TSMManager - E-Mail - kleiner Auszug

The following client schedules have not completed : Started/Pending Failed Missed Completed

Node	Schedule	Act. start time	End time	Status	RC	15 day history (oldest - newest)
01P9571	NT_FS_SCHED_9571	Not started	10/31/2011 00:00:00	Missed	None	

## Backups with failed files

Node	Number of failed files
01P558	7
01P802	4
01P902	1
01P9136	10
01P9159	26
01P9163	6
01P936	16
01P9503	3
01P9508	31
01P9517	10
01P9537	12
01P9539	6
01P9553	1
01P9569	4
01P9570	4
01P9574	46
01P9595	24
01P989	13
02P740	8
03P912	30
SR2	1

# TSMManager - E-Mail - kleiner Auszug

Summary of client activity for the last 24 hours								
Domain	Nodename	Platform	Activity	Data amount	Elapse time	Affected	Failed	Media wait
NT_FILESERVER_DOM	01P2089	WinNT	BACKUP	1,2 GB	00:06	182	50	0
NT_FILESERVER_DOM	01P337	WinNT	BACKUP	1,2 GB	00:03	3771	18	0
NT_FILESERVER_DOM	01P558	WinNT	BACKUP	235,6 MB	00:01	1891	7	0
NT_ORACLESERVER_DOM	01P802	WinNT	BACKUP	2,3 GB	00:12	2264	4	0
LINUX_SERVER_DOM	01P902	Linux86	BACKUP	5,7 GB	00:06	56	1	34
LINUX_SERVER_DOM	01P903	Linux86	BACKUP	6,9 GB	00:10	44	1	0
NT_FILESERVER_DOM	01P904	WinNT	BACKUP	1,2 GB	00:04	5356	0	0
NT_FILESERVER_DOM	01P9102	WinNT	BACKUP	1,1 GB	00:04	3303	8	0
NT_FILESERVER_DOM	01P9121	WinNT	BACKUP	638,5 MB	00:02	488	2	0
NT_ORACLESERVER_DOM	01P9136	WinNT	BACKUP	3,3 GB	00:25	38411	10	0
LINUX_SERVER_DOM	01P9144	Linux86	BACKUP	83,7 MB	00:02	18	0	0
NT_FILESERVER_DOM	01P9147	WinNT	BACKUP	1,9 GB	00:07	356	6	0
NT_FILESERVER_DOM	01P9148	WinNT	BACKUP	455,4 MB	00:04	137	0	0
NT_FILESERVER_DOM	01P9150	WinNT	BACKUP	141,9 MB	00:01	256	0	0
NT_FILESERVER_DOM	01P9151	WinNT	BACKUP	1,3 GB	00:06	289	220	0
NT_ORACLESERVER_DOM	01P9159	WinNT	BACKUP	24,5 GB	02:00	9367	26	0
NT_FILESERVER_DOM	01P916	WinNT	BACKUP	1,3 GB	00:19	5448	0	0
NT_FILESERVER_DOM	01P9160	WinNT	BACKUP	539,6 MB	00:02	244	0	0
NT_FILESERVER_DOM	01P9161	WinNT	BACKUP	1,0 GB	00:08	30004	0	0
NT_FILESERVER_DOM	01P9162	WinNT	BACKUP	21,4 GB	00:53	41807	30	51
NT_ORACLESERVER_DOM	01P9163	WinNT	BACKUP	1,1 GB	00:09	6335	6	0
NT_ORACLESERVER_DOM	01P9169	WinNT	BACKUP	12,2 GB	01:51	56037	0	35
NT_ORACLESERVER_DOM	01P9170	WinNT	BACKUP	4,3 GB	00:10	9	0	0
NT_ORACLESERVER_DOM	01P9171	WinNT	BACKUP	9,1 GB	00:18	387	0	0
NT_FILESERVER_DOM	01P9172	WinNT	BACKUP	3,4 GB	00:16	421	4	0
NT_FILESERVER_DOM	01P9179	WinNT	BACKUP	1,8 MB	00:00	44	0	0
NT_FILESERVER_DOM	01P9181	WinNT	BACKUP	39,1 GB	00:29	908	12	33





# TSMManager GUI Session

TSMManager 5.0 — Licensed to Plansee Group Service GmbH for 2 server(s) — Software Subscription and Support expiration: 08.01.2013 — admin is logged on

Configuration Policies Nodes Server Operations Hardware Volumes History Analysis Utilities Reports Vaulting Favorites TSM support Windows Help

Exit Windows config: Save TSMWIN Automatic update every: No update Update now Attention Show

TSMAXX TSMWIN

Functions Display mode: Logo Refresh rate: 15 seconds Click here for gadget settings...

**Fast path**

- Query libvolume
- Query license
- Query log
- Query logvolume
- Query machine

**Functions**

- Nodes
- Policies
- Server
- Operations
- Hardware
- Volumes
- History
- Analysis
- Utilities
- Reports
- Vaulting

**Open windows**

- All node overview (TSMWIN)
- Associations (TSMWIN)
- Colligation groups (TSMWIN)
- Drive usage analysis (TSMWIN)
- Volumes in library (TSMWIN)

**Servers**

- TSMAXX
- TSMWIN

**TSMWIN: Volumes in library (02.11.2011 10:41:58)**

Library	Volume	Status	Last use	Home element	Owner
JAG1	JB0002	Scratch	?	?	?
JAG1	JB0005	Scratch	?	?	?
JAG1	JB0009	Scratch	?	?	?
JAG1	JB0021	Scratch	?	?	?
JAG1	JB0026	Scratch	?	?	?
JAG1	JB0036	Scratch	?	?	?
JAG1	JB0040	Scratch	?	?	?
JAG1	JB0054	Scratch	?	?	?
JAG1	JB0056	Scratch	?	?	?
JAG1	JB0060	Scratch	?	?	?
JAG1	JB0061	Scratch	?	?	?
JAG1	JB0062	Scratch	?	?	?

**TSMWIN: All node overview (02.11.2011 10:38:20)**

Node name	Domain	Platform	OS level	Comp.	Last access	Option set	Max. MP	Locked	Client level	IP-address	Contact	Type	Col. group	TC
01P114	FILESERVER_	WinNT	5.01	CLIENT	2011-11-01 17:10:15		2	NO	6.2.0.0	192.168.109.114	J.Lumpert Kl.	CLIENT	CG16	
01P904	FILESERVER_	WinNT	5.02	CLIENT	2011-11-02 00:13:18		2	NO	6.2.0.0	10.1.141.4		CLIENT	CG11	
01P916	FILESERVER_	WinNT	6.01	CLIENT	2011-11-02 04:33:13		2	NO	6.2.0.0	10.1.129.16	nd Robert Tel	CLIENT	CG15	
01P9524	FILESERVER_	WinNT	6.01	CLIENT	2011-11-02 05:19:56		2	NO	6.2.0.0	192.168.132.183	nd Robert Tel	CLIENT	CG19	
01P9531	ESERVER_DD	WinNT	6.01	CLIENT	2011-11-02 00:41:51		2	NO	6.2.0.0	192.168.132.61	berg Heyko Tr	CLIENT	CG2	
01P9551	FILESERVER_	WinNT	6.01	CLIENT	2011-11-02 08:22:44		2	NO	6.2.0.0	192.168.132.30	nd Robert Tel	CLIENT	CG20	
01P9558	FILESERVER_	WinNT	6.01	CLIENT	2011-10-28 07:05:17		2	NO	6.2.0.0	192.168.132.186	nd Robert Tel	CLIENT	CG20	
01P9560	FILESERVER_	WinNT	6.01	CLIENT	2011-11-02 06:33:12		2	NO	6.2.0.0	192.168.132.12	nd Robert Tel	CLIENT	CG19	
01P9561	FILESERVER_	WinNT	6.01	CLIENT	2011-11-02 02:26:46		2	NO	6.2.0.0	192.168.132.11	nd Robert Tel	CLIENT	CG5	
01P9565	FILESERVER_	WinNT	6.01	CLIENT	2011-11-02 06:26:28		2	NO	6.2.0.0	192.168.126.33	nd Robert Tel	CLIENT	CG11	
01P9565_OLD	EXC	WinNT	6.01	CLIENT	2010-11-22 08:55:15		2	NO	6.2.0.0	192.168.126.33	nd Robert Tel	CLIENT	CG11	
01P9576	FILESERVER_	WinNT	6.01	CLIENT	2011-11-02 08:35:10		2	NO	6.2.0.0	192.168.126.15	nd Robert Tel	CLIENT	CG20	
01P9608	FILESERVER_	WinNT	6.01	CLIENT	2011-11-02 10:10:08		2	NO	6.2.0.0	192.168.126.35	nd Robert Tel	CLIENT	CG11	
03P901	FILESERVER_	WinNT	6.01	CLIENT	2011-11-02 04:20:35		2	NO	6.2.0.0	10.3.129.1	berg Heyko Tel	CLIENT	CG5	
03P902	FILESERVER_	WinNT	6.01	CLIENT	2011-11-02 06:12:48		2	NO	6.2.0.0	192.168.132.31	nd Robert Tel	CLIENT	CG20	

**TSMWIN: Colligation groups (02.11.2011 10:48:20)**

Ungrouped nodes	Defined groups	Members of group
03P912 NAGIOS	CG1 CG10 CG11 CG12 CG13 CG14	01P904 01P909MIG 01P9108 01P9131 01P9194 01P9501 01P9510 01P9517 01P9565

**TSMWIN: Associations (02.11.2011 10:43:36)**

Domain	Node	Schedule
AKX_SERVER_DOM DOM_SERVER_10 DRM_WIN_FILE EXC EXC FILER FILER_12_MONTHS LINUX_SERVER_DOM MIG NT_FILESERVER_DOM NT_FILESERVER_DOM_JAG	01P948 01P9531 01P9543 01P9548	NT_FS_SCHED_948 (22:00) NT_FS_SCHED_9531 (12:00) NT_FS_SCHED_9543 (22:30) NT_FS_SCHED_9548 (23:00)

Define an association between 01P948 and NT\_FS\_SCHED\_9548

**TSMWIN: Drive usage analysis (02.11.2011 10:30:42)**

01 Nov 18:00 >> 02 Nov 08:00 All libraries Go Print

**Mounts -- click a bar for details**

**Percentage of drive capacity used per hour**



# TSMManager GUI Session

TSMManager 5.0 - Licensed to Plansee Group Service GmbH for 2 server(s) - Software Subscription and Support expiration: 08.01.2013 - admin is logged on

Configuration Policies Server Operations Hardware Volumes History Analysis Utilities Reports Vaulting Favorites TSM support Windows Help

Exit Windows config: Save TSMWIN Automatic update every: No update Update now Attention Show

### Functions

Fast path: Query libvolume, Query license, Query log, Query logvolume, Query machine

Functions: Configuration, Nodes, Server, Policies, Operations, Hardware, Volumes, History, Analysis, Utilities, Reports, Vaulting

Open windows: Database and log status (TSM), Library / Volume functions (TSM), Management classes (TSM), Node data summary (TSM), Node disk space status (TSM)

Servers: TSMADK, TSMWIN

### TSMWIN: Database and log status (02.11.2011 11:02:32)

Category	Item	Value
Database	Available space (MB)	52092
	Assigned capacity (MB)	52092
	Max. extension (MB)	0
	Max. reduction (MB)	13248
	% utilized	58.4
	Cache hit %	98.4
	Last good backup	2011-11-01 12:31:21
	Incremental backups	0
	Changed since backup (MB)	3599.3
	Spacetrigger %	Not defined
Log	Available space (MB)	12000
	Assigned capacity (MB)	12000
	Max. extension (MB)	0
	Max. reduction (MB)	11996
	% utilized	0.0
	Consumption (MB)	1106898.35
	Consumption reset date	2011-07-07 13:17:01
	Spacetrigger %	Not defined
	Logmode	NORMAL

### TSMWIN: Library / Volume functions (02.11.2011 11:25:40)

Library: JAG1

Status:  Private  Scratch  Cleaner

Checklabel:  Yes  No  Barcode

Cleanings: 50

Buttons: Do it, Exit, Open outstanding requests window

### TSMWIN: Node disk space status (02.11.2011 11:18:29)

NodeName	Domain	Filespace	Capacity	% used	Free space	Stgpool
SR1	UX_SERVER_D0	/tmp	1024.0 MB	25.8	768.0 MB	JAG3TAPE
SR1	UX_SERVER_D0	/opt	512.0 MB	29.4	363.0 MB	JAG3TAPE
SR1	UX_SERVER_D0	/home	256.0 MB	4.7	245.0 MB	JAG3TAPE
SR1	UX_SERVER_D0	/saplog	5.0 GB	16.0	4.2 GB	JAG3TAPE
SR1	UX_SERVER_D0	/var	4.0 GB	14.1	3.4 GB	JAG3TAPE
SR1	UX_SERVER_D0	/	1024.0 MB	23.0	788.0 MB	JAG3TAPE
SR1	UX_SERVER_D0	/usr	3.3 GB	88.4	399.0 MB	JAG3TAPE
SR2	UX_SERVER_D0	/var	4.0 GB	28.8	2.9 GB	JAG3TAPE
SR2	UX_SERVER_D0	/	1024.0 MB	13.2	890.0 MB	JAG3TAPE
SR2	UX_SERVER_D0	/usr	3.5 GB	92.1	286.0 MB	JAG3TAPE
SR2	UX_SERVER_D0	/opt	256.0 MB	49.3	130.0 MB	JAG3TAPE
SR2	UX_SERVER_D0	/tmp	1024.0 MB	24.8	778.0 MB	JAG3TAPE
SR2	UX_SERVER_D0	/saplog	5.0 GB	46.9	2.7 GB	JAG3TAPE
SR2	UX_SERVER_D0	/home	256.0 MB	3.7	248.0 MB	JAG3TAPE
Sum - 01P091	UX_SERVER_D		25.2 GB		20.4 GB	
Sum - 01P114	FILESERVER_I		308.4 GB		54.0 GB	
Sum - 01P114L	UX_SERVER_D		73.5 GB		51.4 GB	
Sum - 01P2089	FILESERVER_I		364.4 GB		189.0 GB	
Sum - 01P337	FILESERVER_I		251.4 GB		213.8 GB	
Sum - 01P558	FILESERVER_I		37.3 GB		31.7 GB	
Sum - 01P802	FILESERVER_I		71.0 GB		56.1 GB	

### TSMWIN: Node data summary (02.11.2011 11:31:23)

Node: 01P9159

#### Node definitions

Node Name: 01P9159  
Platform: WinNT  
Client OS Level: 6.01  
Client Version: Version 5, release 1, level 3.0  
Policy Domain Name: NT\_ORACLESERVER\_DOM  
Last Access Date/Time: 11/02/2011 03:05:13

#### File spaces

Filespace	Type	Capacity	% Utilized	Last backup	ID
\\01p9159vc\$	NTFS	32.0 GB	67.8	2011-11-02 01:07:24	2
\\01p9159vd\$	NTFS	40.0 GB	59.9	2011-11-02 02:54:18	3
\\01p9159ve\$	NTFS	6.0 GB	0.9	2011-11-02 02:54:18	4
\\01p9159vf\$	NTFS	12.0 GB	9.5	2011-11-02 01:02:20	5
State\NULL\System St	VSS	0.0 MB	0.0	2011-09-19 02:49:21	1

#### Occupancy

Total files: 338 506 Total occupancy: 147.5 GB

Type	Filespace	Storage pool	# of files	Occupancy
Bkup	\\01p9159ve\$	JAG3TAPE	38	0.0 MB
Bkup	\\01p9159vf\$	JAG3TAPE	65	1.1 GB
Bkup	\\01p9159vd\$	JAG3TAPE	9505	101.0 GB
Bkup	3159\SystemState\NULL\System State\System\$	JAG3TAPE	246132	35.9 GB
Bkup	\\01p9159vc\$	JAG3TAPE	82766	9.5 GB

#### Schedules

Domain	Schedule name	Action	Start time	Period	Unit	Day of w...
NT_ORACLESERVER_DOM	NT_ORACLESERVER_DOM\NT_ORACLESERVER_DOM\OS_SCHD_915 INCREMENTAL		01:00:00	1	DAYS	WEEKDAY

### TSMWIN: Management Classes (02.11.2011 11:03:33)

Domain: DRM\_WIN\_FILE Policy set: ACTIVE

Management Class	Default	Destination	VERE	RETE	VERD	RETD	Serialization	Destination	RETV	Serialization
ARCH10UJAHRE	No	JAG3TAPE	4	60	1	60	SHRSTATIC	JAG3TAPE	3650	SHRSTATIC
DIRM	No	DIRPOOL	4	60	1	60	SHRSTATIC	ARCHIVEPOOL	35	SHRSTATIC
MC_DRM_WIN_FILESERVER	Yes	JAG3TAPE	4	60	1	60	SHRSTATIC	ARCHIVEPOOL	35	SHRSTATIC
TAPE	No	JAG3TAPE	4	30	0	60	SHRSTATIC	ARCHIVEPOOL	365	SHRSTATIC

### Backup and Archive Diagrams

Backup: JAG3TAPE (Disk pool) -> JAG3 (Tape pool) -> JAG1 (Library)

Archive: ARCHIVEPOOL (Disk pool) -> JAG3TAPE (Tape pool) -> JAG3 (Device class) -> JAG1 (Library)

## Vorschau

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- Reutte:
  - Wechsel auf neue Hardware
  - Upgrade auf TSM V6
  - Anschaffung eines zweiten Taperoboters
  - Konzepte überdenken
    - TDP/R3 für DB2 oder DB2 native ?
    - Flashcopy ?
    - Sicherungszeiten Microsoft Exchange ?
  
- Asia Hub:
  - Upgrade auf TSM V6
  
- Ausrollen weiterer kleiner Standorte

## Kontakt

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▪ Vielen DANK

- Mahlzeit



