IBM Tivoli Storage Manager 6.2 and IBM Tivoli Storage Manager FastBack 6.1

Reporting and Monitoring

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Technical Enablement for Tivoli Storage

August 2010

Agenda

- IBM TSM Reporting and Monitoring

- Thoughts on IBM Tivoli Monitoring (ITM)

- IBM TSM FastBack Reporting

Agenda

- **IBM TSM Reporting and Monitoring**

- Thoughts on IBM Tivoli Monitoring (ITM)

- IBM TSM FastBack Reporting

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TSM 6: Reporting and Monitoring

- **Reporting and Monitoring solution for TSM**

  Will report on any TSM server at and later than version 5.3

  Compliments and integrates with TSM Admin Center

  Scalable enough to manage a farm of TSM servers

  Flexible and extensible to allow customers to define their own reports using Eclipse/BIRT development environment

  Integrate with reporting tools from other IBM products

  Integrate with monitoring tools from other IBM products

  Operational Reporting (TSM Versions 4 and 5) is being discontinued

TSM Reporting/Monitoring Components

- **ITM** – IBM Tivoli Monitoring

    Provides a framework for collecting and storing real-time metrics

- **TEP** – Tivoli Enterprise Portal

    Web-based interface for ITM

- **ITM-TSM Agent** – IBM Tivoli Monitoring Agent for TSM

    Specific ITM Agent which queries TSM Servers

- **TSM Admin Center** – TSM Administration Center

    Console for TSM Managing/Reporting, plugs into Tivoli Integrated Portal (TIP)

- **DB2** - Data Warehouse Database

    Database to keep long term TSM Reporting data

- **WAS** – Websphere Application Server

    Transparent underlying middleware

    -> All in one Installation Package with Installation Wizard

Tivoli Integrated Portal (TIP)

- New Tivoli integrated Portal
  - Includes former Integrated Systems Console
  - Allows for web-based browser access

- Build to support various products as 'plug-ins'
  - TSM Administration, TSM Reporting, Tivoli Common Reporting, FastBack, IBM Information Archive, FastBack for Workstations, TPC, ….
  - Products can plug-in into an existing TIP installation on a centralized Server

- Not part of TSM Reporting Monitoring 6.2 Installation Package
  - Must be pre-installed either through the TIP stand-alone package or through the TSM 6.2 Server installation package

- Recommend to be installed on a separate Server
  - Managing and Reporting for TSM

Tivoli Integrated Portal (TIP)

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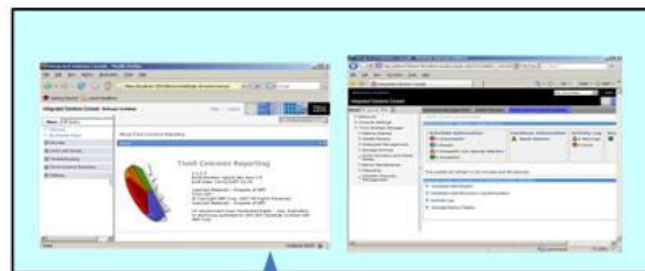# TSM Reporting Monitoring Characterisitics

- Reporting and Monitoring for TSM

- All on one install media (DVD) separately from the TSM Server

- Can be installed and run independently from the TSM Server

- Can plug into an existing ITM 6.2 installation or run stand-alone

- No additional charge

- Comes with out-of-the-box reports and pre-configured monitors

- Custom Reporting: Reports can be added using BIRT (optional)

- Integrates into TIP

- Integrates with Tivoli Common Reporting and Reporting
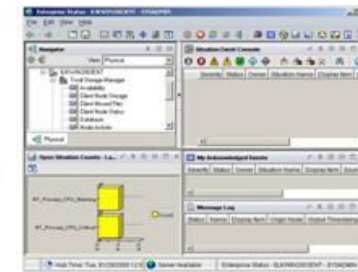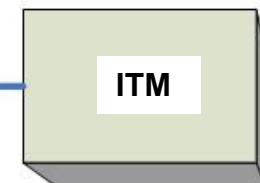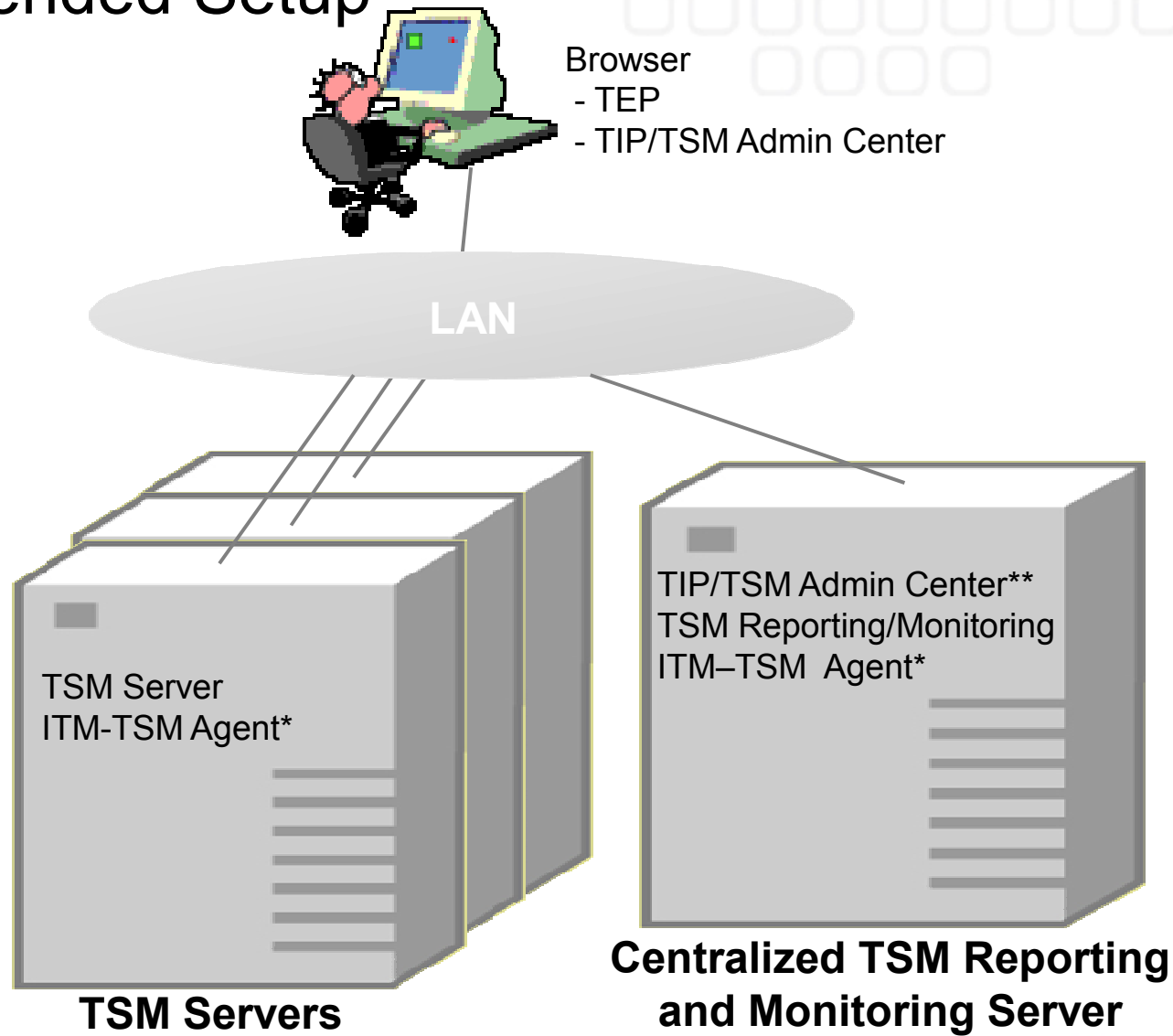
User's View

TSM Admin Center in TIP

TEP

Eclipse

BIRT Reporting Engine

Reports

User

Monitoring

ITM

Recommended Setup

Browser
 - TEP
 - TIP/TSM Admin Center

LAN

TSM Server
ITM-TSM Agent*

TSM Servers

TIP/TSM Admin Center**
TSM Reporting/Monitoring
ITM–TSM Agent*

**Centralized TSM Reporting
and Monitoring Server**

*   Administrator can chose where to install
** Can also *manage* TSM Servers

Flow of Data

MONITORS: TEP/ITM

REPORTS: TIP/TSM Admin Center

Summarization Pruning Agent

ITM-TSM Agent

TSM DB

TEPS DB2 Instance

WAREHOUSE DB2 Instance

DB2
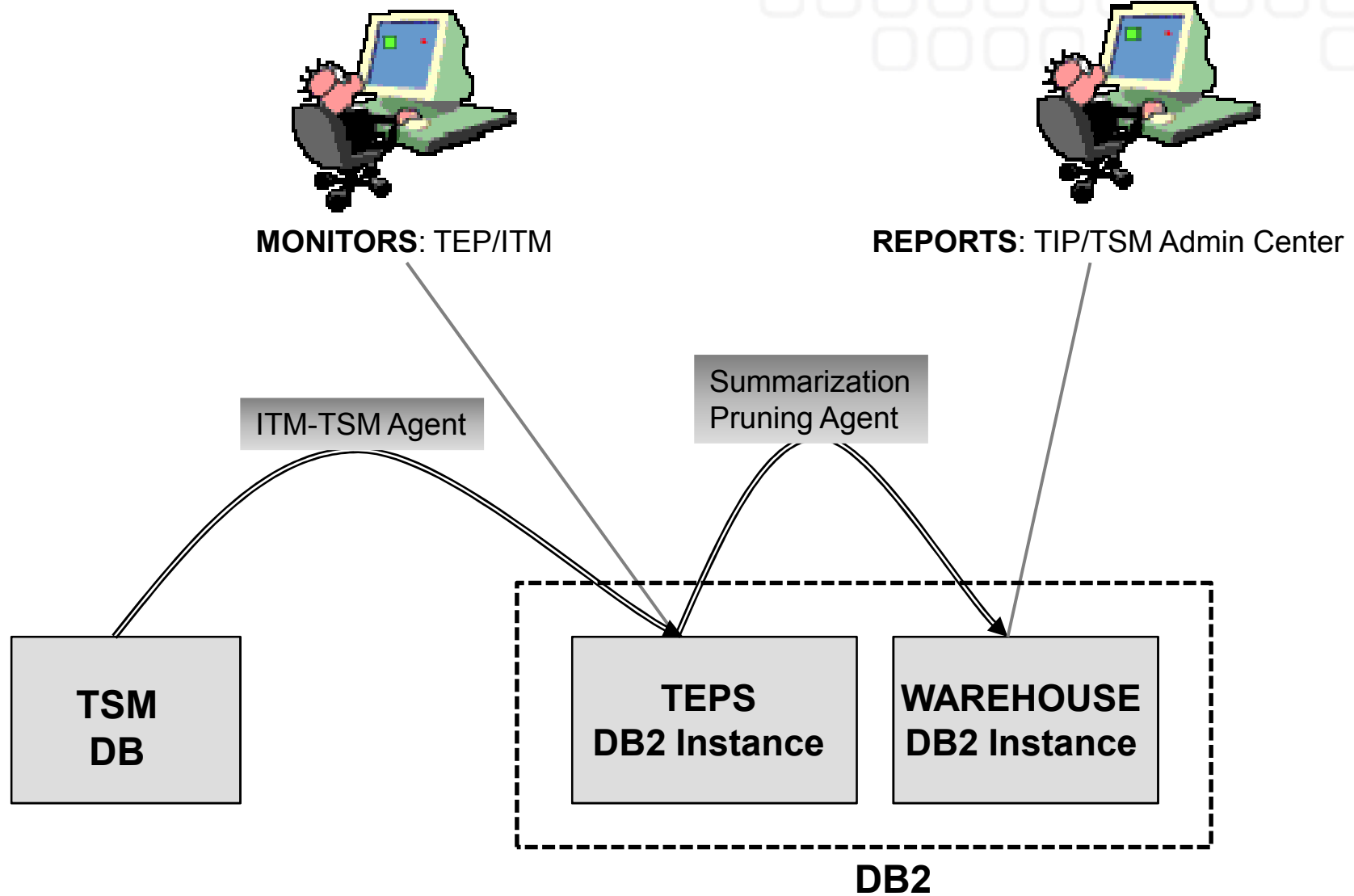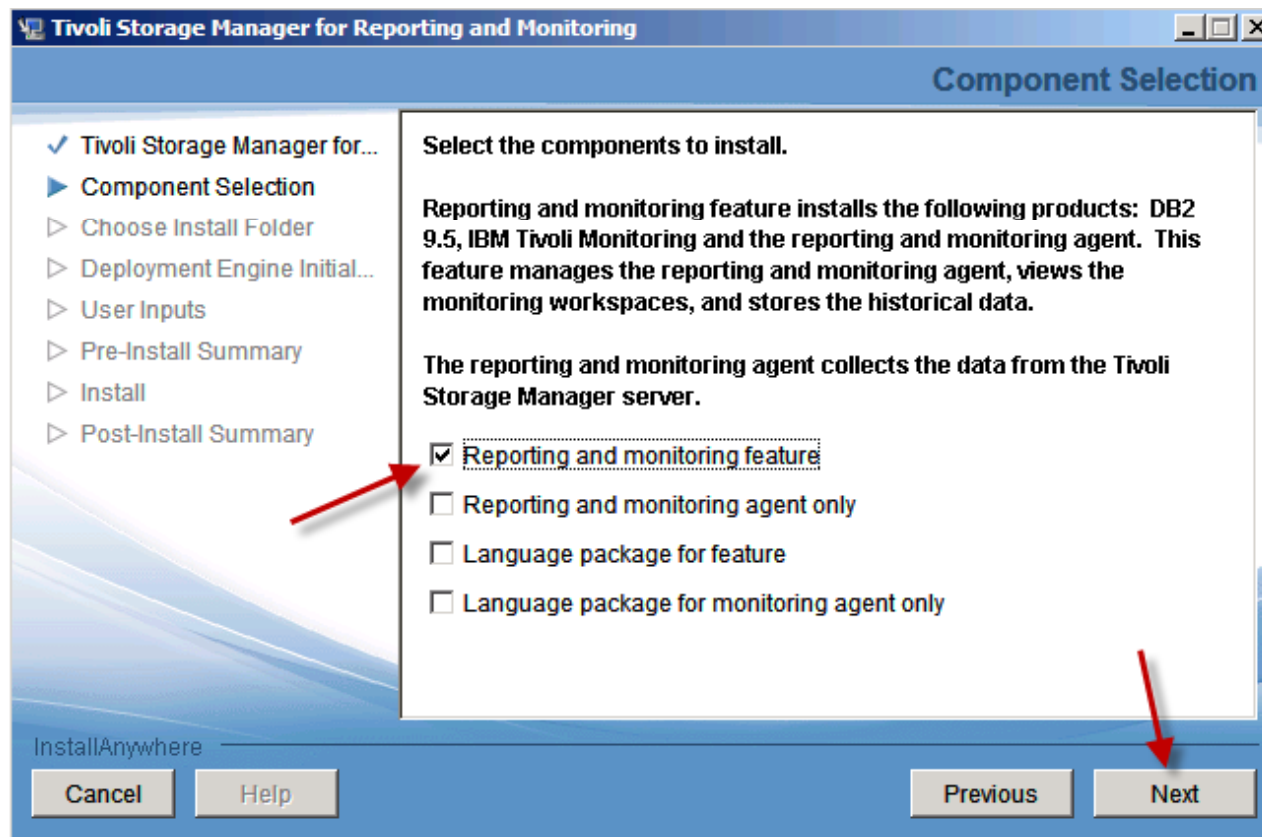
Installation Options

- **Small-Medium business**
  - TIP and Reporting and Monitoring on a single server
  - Agents installed on the same server remotely talking to TSM servers*

- **Large business**
  - Monitoring on a single server
  - TIP and Reporting on a separate server
  - Agents installed on the Monitoring server remotely talking to TSM servers*

- **Enterprise business**
  - Multiple Monitoring servers
  - Clustered Reporting servers
  - Agents installed on the Monitoring servers remotely talking to TSM servers*

*** Alternatively Agents can be installed on the TSM Servers**

1. Installation Step

- 1. Step: Install TSM 6.2 Reporting/Monitoring Installation Package
    - One package including ITM/TEP/DB2/WAS/ITM-TSM Agent
    - ITM – TSM Agent can be installed separately
    - TSM 6.2 Reporting/Monitoring installation package
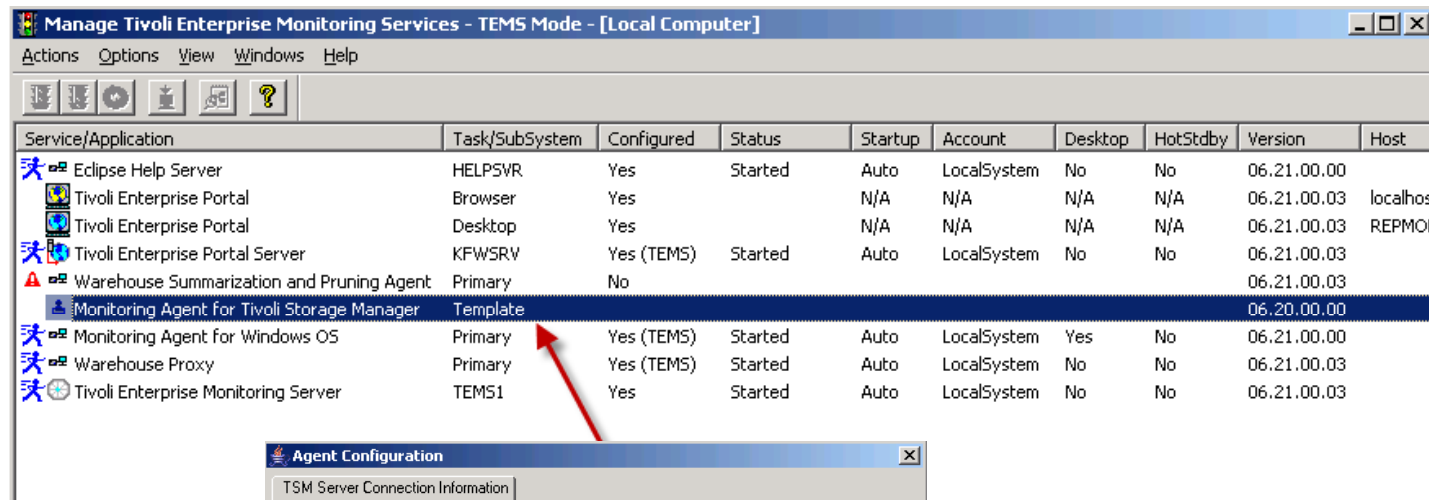   - Does not include TIP and TCR

2. Installation Step

- 2. Step: Install TSM 6.2 Admin Center
  - Stand Alone installation package
  - Alternatively part of the TSM 6.2 Installation package
  - Includes TIP and TCR
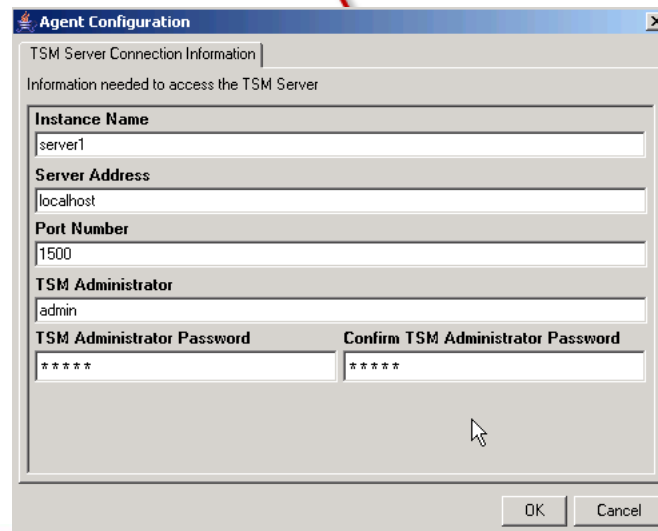 - If TIP and TCR are already installed, this step is not required

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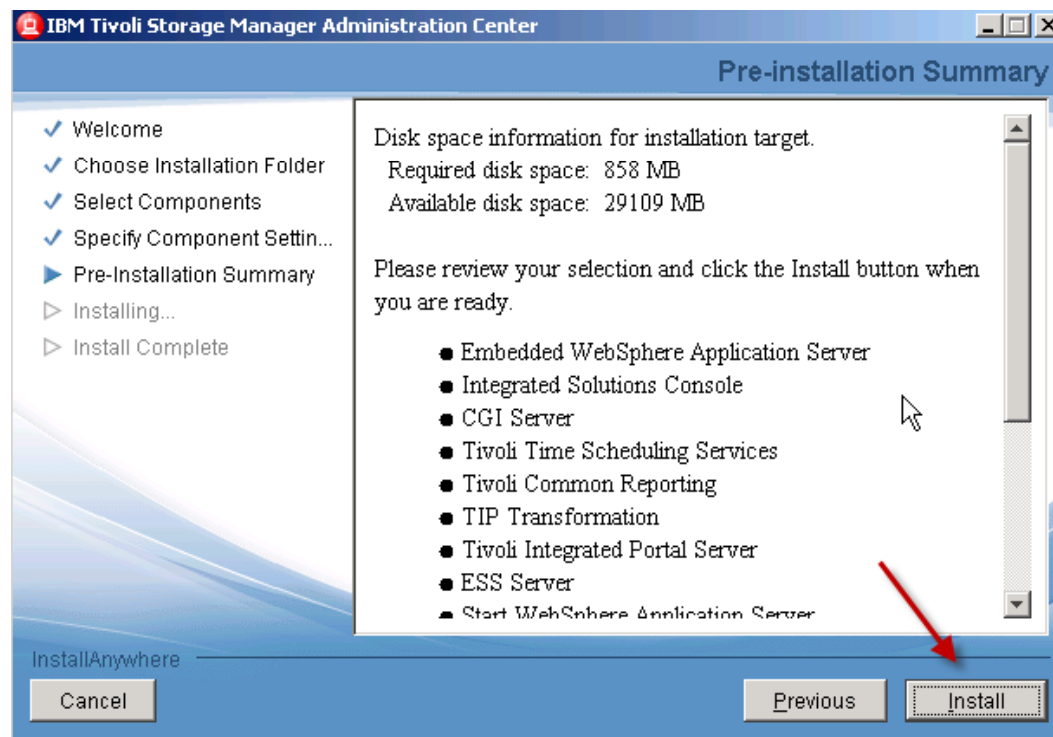
3. Installation Step

- 3. Step: Configure TSM Monitoring in ITM using the ITM-TSM Agent
  - Create TSM Agents using the Service Template

4. Installation Step

- 4. Step: Configure TSM Reporting in ITM
  - Reconfigure TEP Server
  - Configure Warehouse Summarization and Pruning Agent
  - Configure Historical Data Collection in TEP
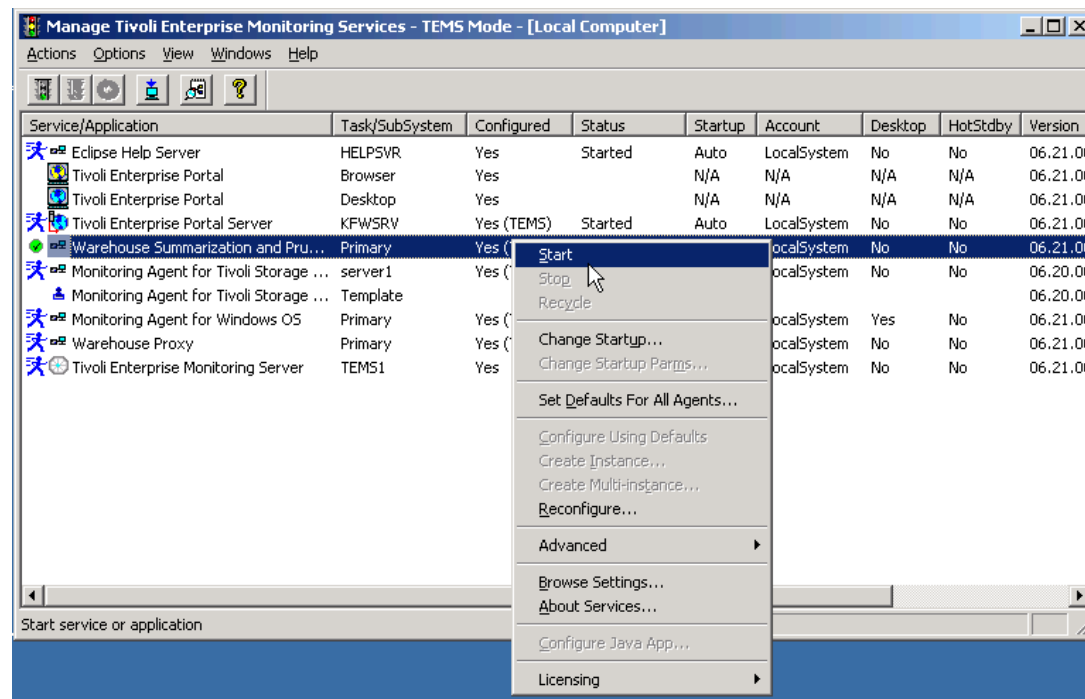
5. Installation Step

- 5. Step: Configure TSM Reporting in TIP
  - Configure Data Sources for TSM Reports (default is DB2)

Supported TSM Servers

- TSM 5.3 Server
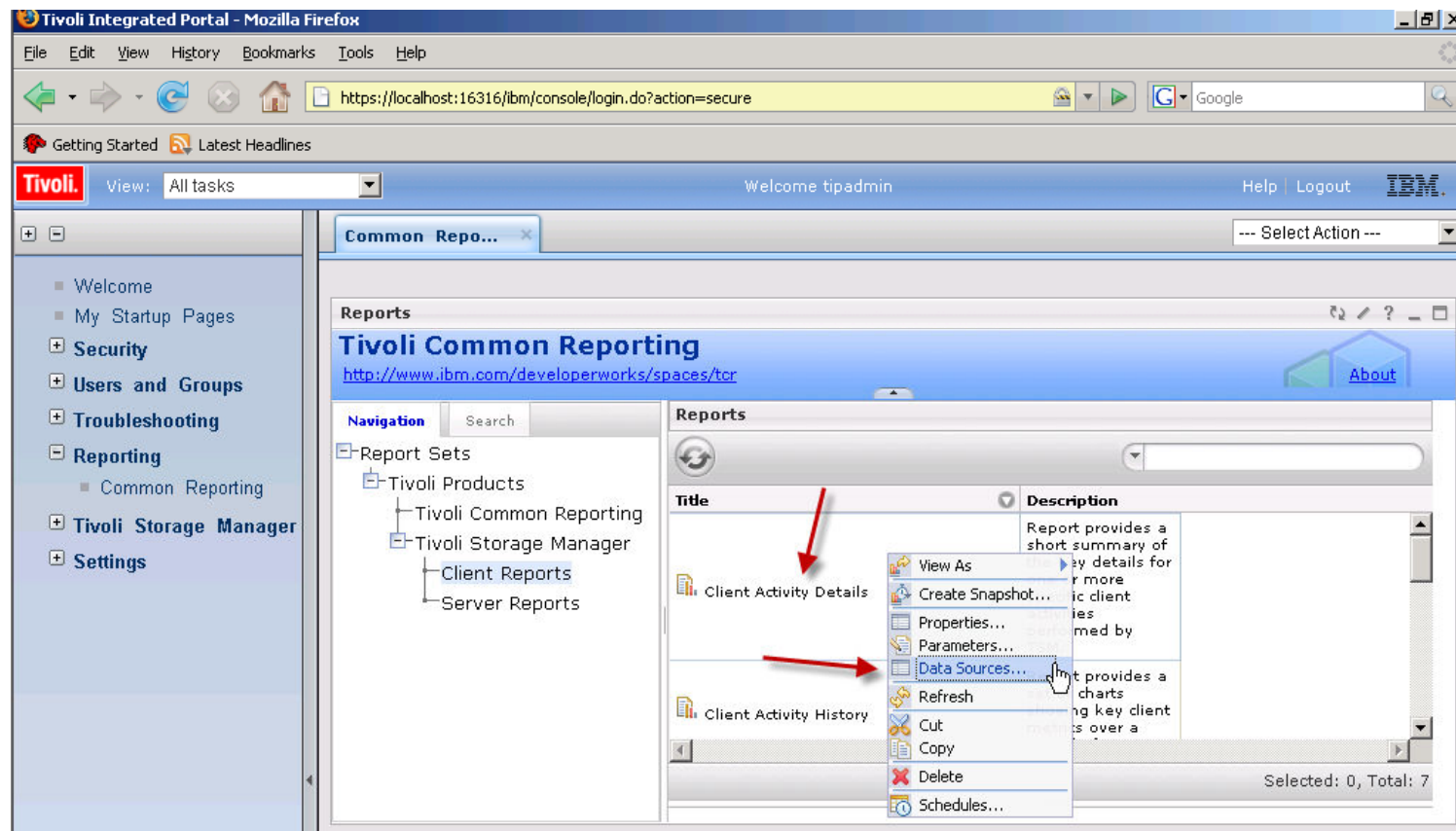- TSM 5.4 Server
- TSM 5.5 Server
- TSM 6.1 Server
- TSM 6.2 Server

All operating systems for TSM Servers (Windows, Unix, OS/390, …) are supported for Monitoring and Reporting.

Supported Operating Systems for ITM server :

- Windows 2003 Server

- Windows 2008 Server

- AIX 64 bit

- Linux (x86) 32 and 64 bit

Supported Operating Systems for ITM-TSM Agent

- – Windows 2003 Server

- – Windows 2008 Server

- – AIX 64 bit

- – Linux (x86) 32 and 64 bit

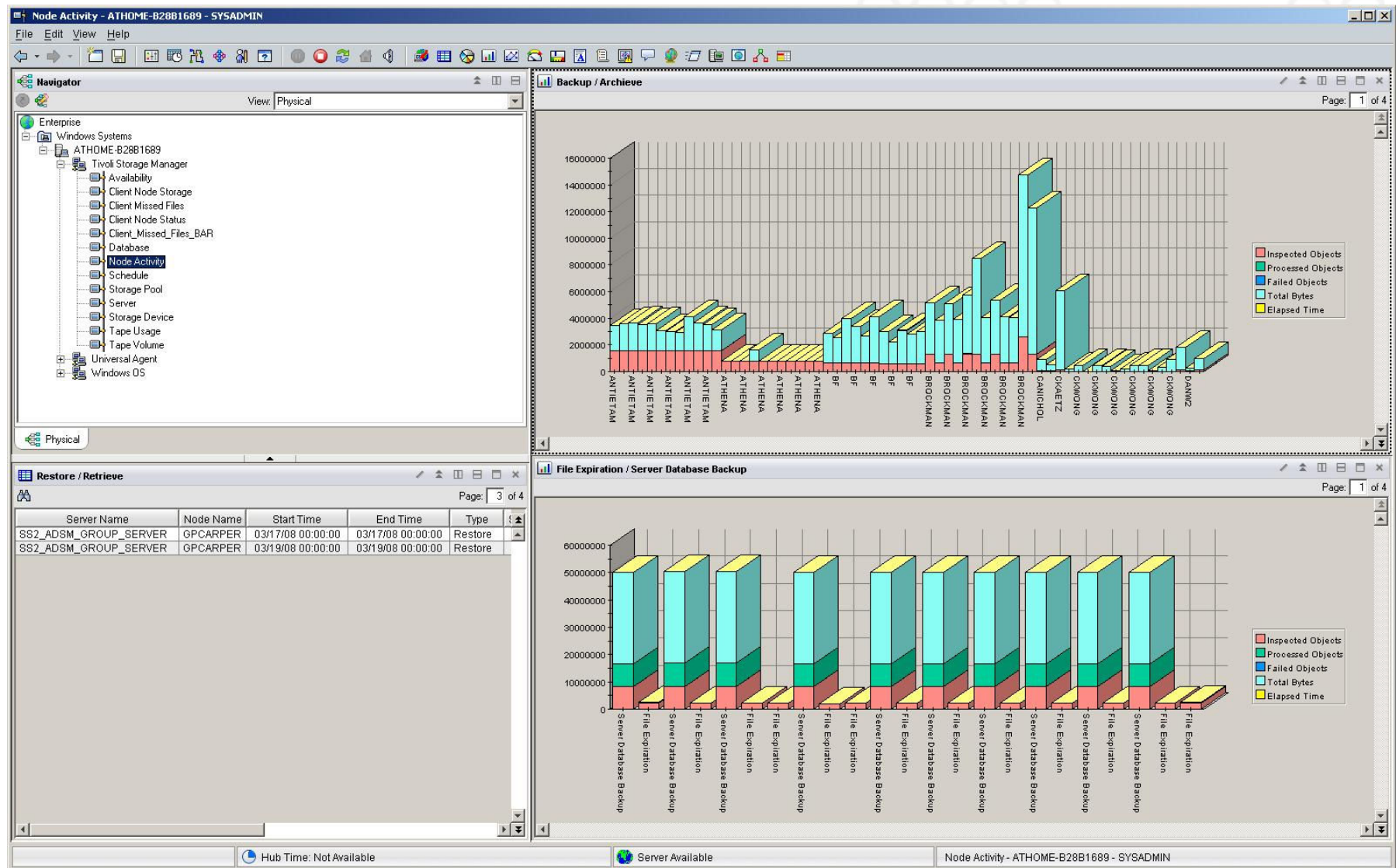**For all other operating systems supported by TSM, the agent can run remotely and fully support them.**

Monitoring Workspaces
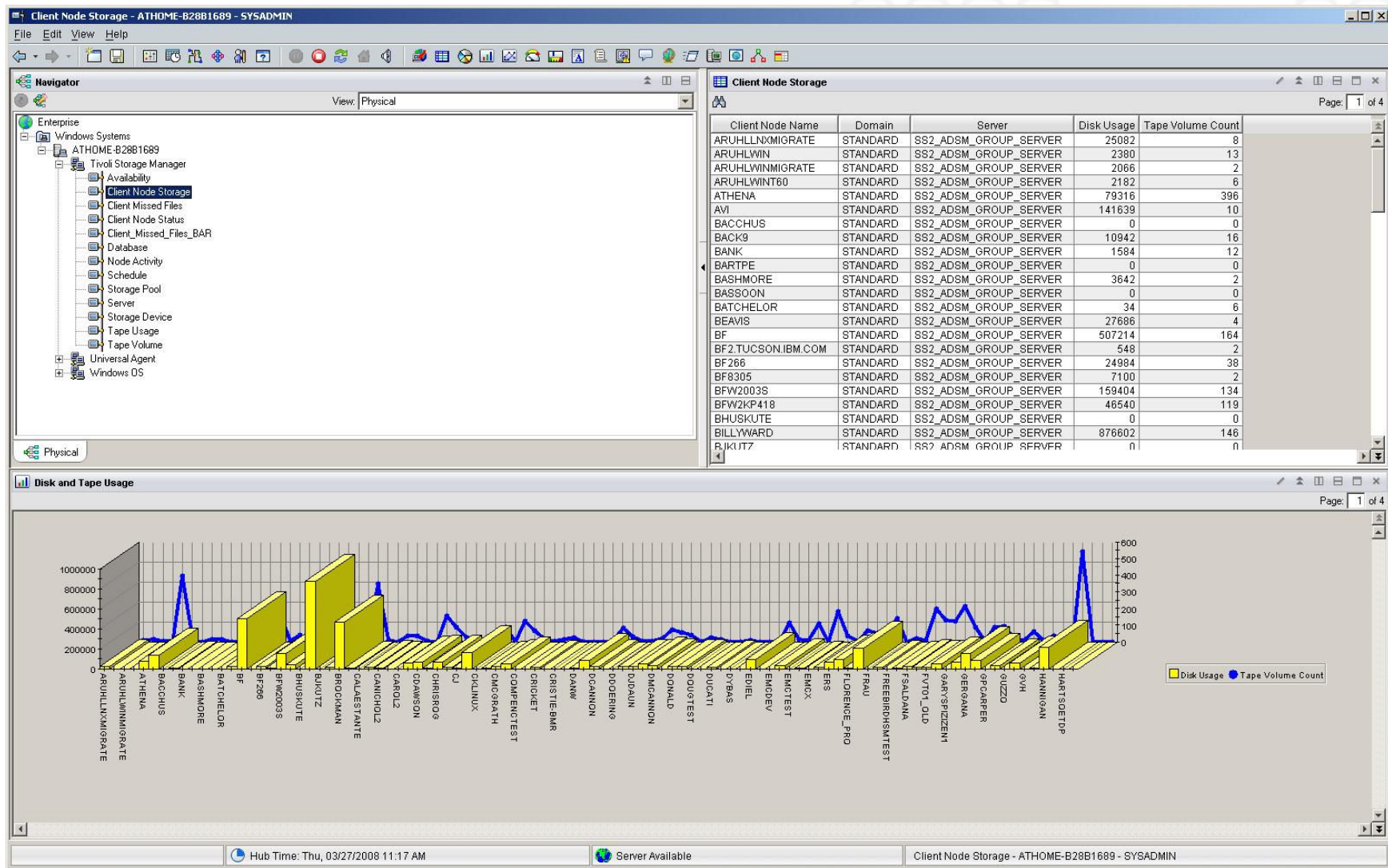
- Scheduled Client Activity

  Forthcoming scheduled client based activities

- Scheduled Server Activity

  Forthcoming expiration, migration activities

- Client Current Activity

  Current client operations, backup/restore etc

- Server Current Activity

  Current server operations, restoration, migration etc

- Current Errors

  Recent errors and operation failure details

- TSM Database Status

  Health and size of database and logs

- Tape Device Status

  Status of volumes and usage of devices

- Storage Pool Status

  Capacity used within storage pool

- Client Backup Status

  Last backup of clients

Example – Node Activity Monitor

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Example: Node Storage Monitor

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Example: Server Overview Monitor

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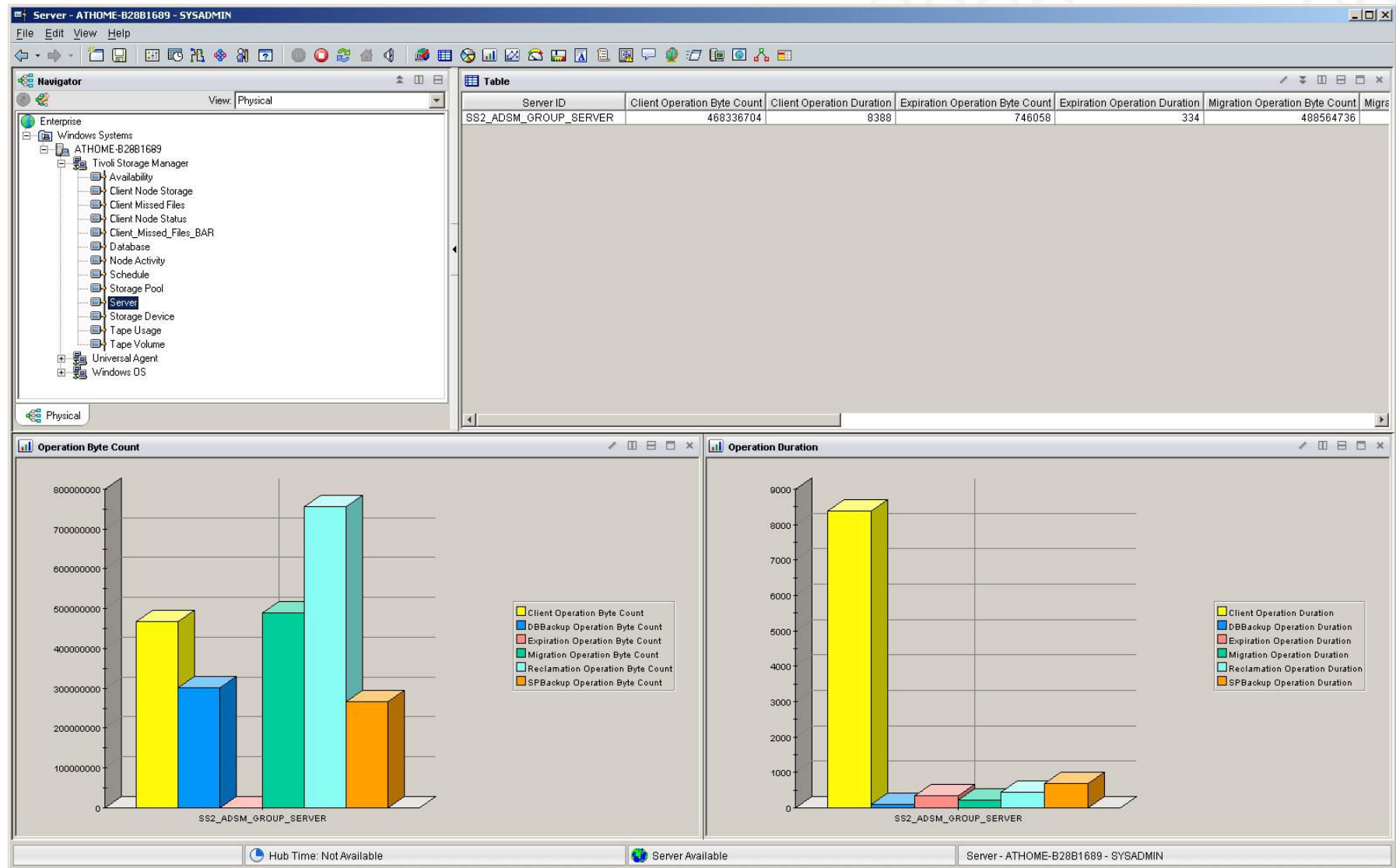
Example: Tape Volumes Monitor

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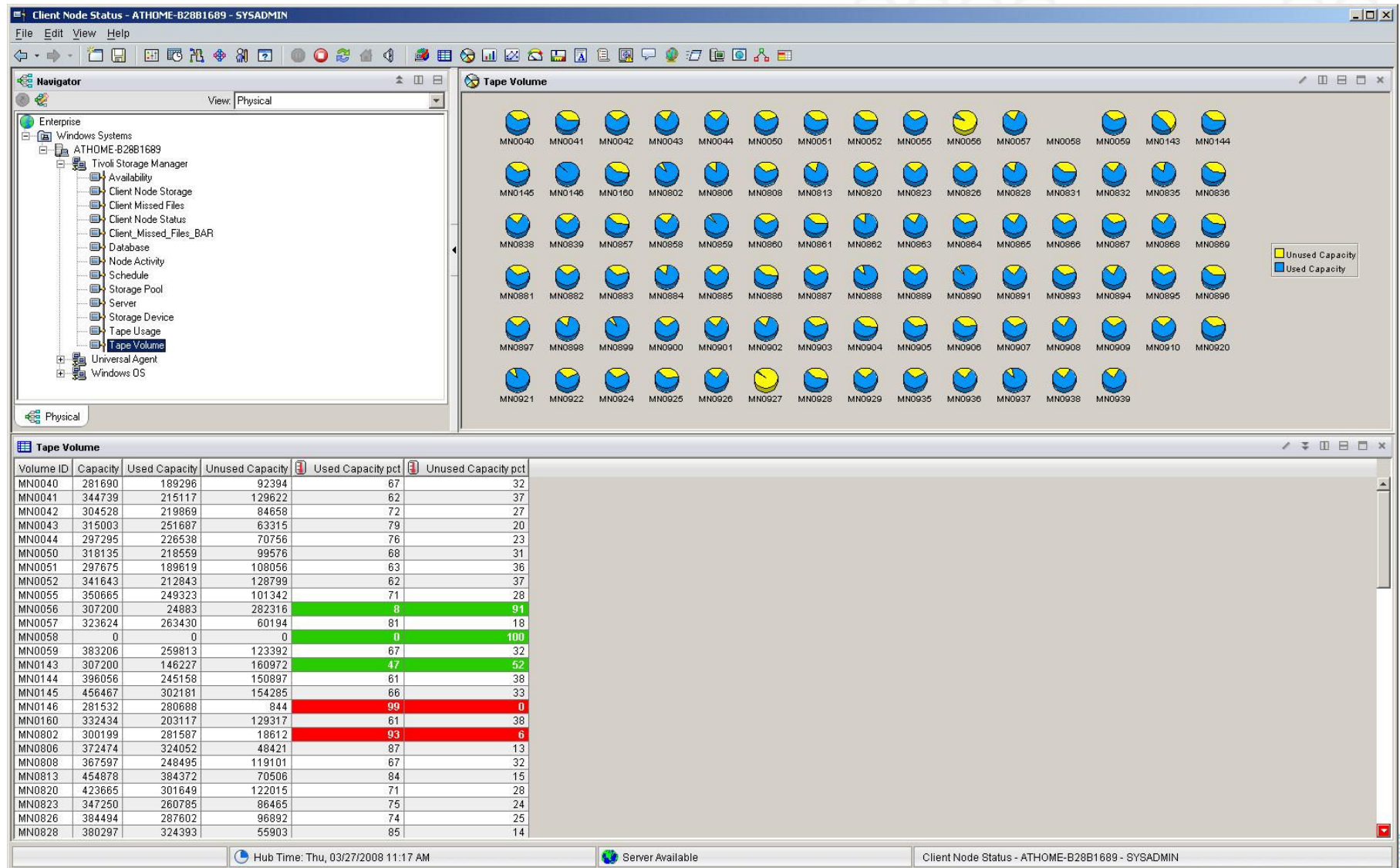
Historical Reports

- Client Reports

  Job Status

  Backup Currency

  Storage Capacity backed up

  Details of backups

  Top 10 backups

  Missed backup files

  Backup statistics with time
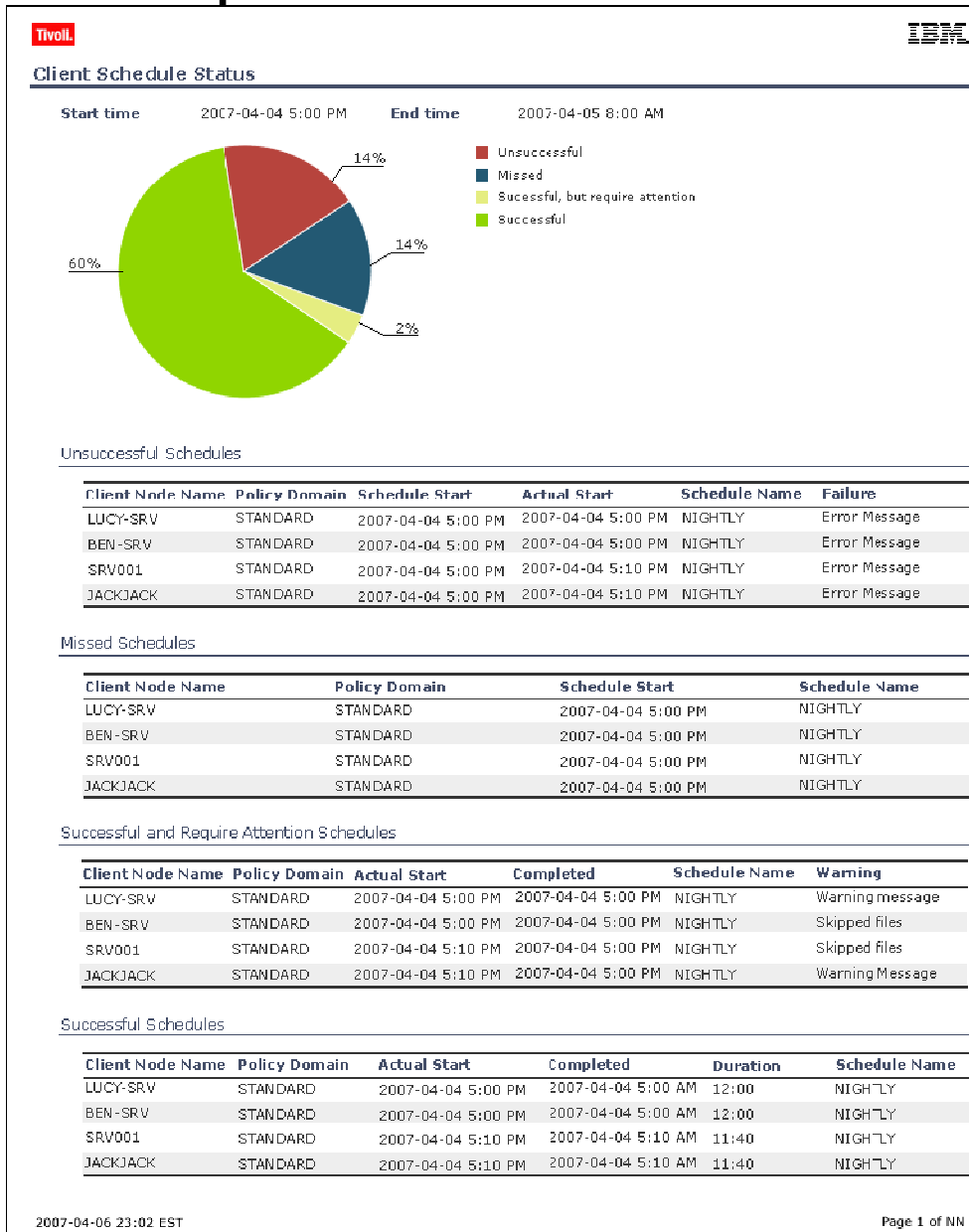
  Details of restores

  Top 10 restores

  Restore statistics with time

  Details of archives

  Top 10 archives

  Archives statistics with time

  Details of retrieves

  Top 10 retrieves

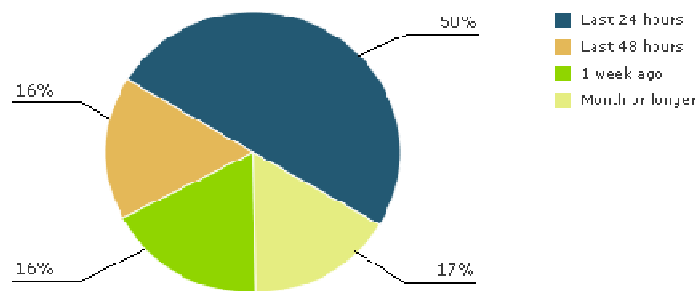 Retrieve statistics with time

- Server reports

  Job Status

  Server throughput

  Server Resource Usage

  Database Details

  Disk and file usage

  Tape usage

  Other storage usage

  Tape volume usage analysis

  Tape capacity analysis

  Tape device errors

  Device usage history

  Server machine utilization

Example: Client Schedule Report

Example: Client Backup Currency Report

Example: Storage Capacity Projection Report
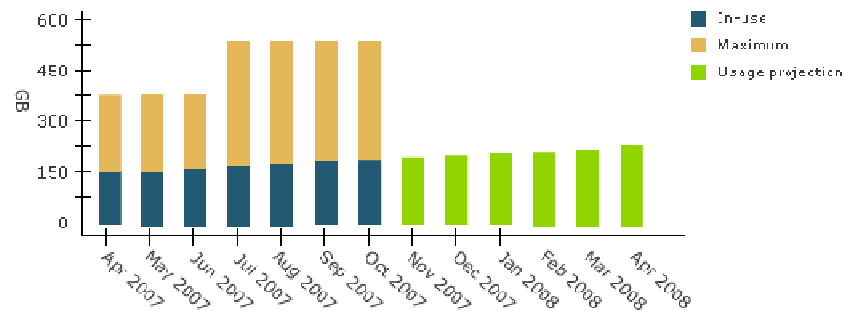
Updates in TSM 6.2

- Reporting and Monitoring moved into TIP

- Reporting and Monitoring uses TCR 1.2

- Scheduling of Reports

- Support of ITM Agent Builder
    - Drag and Drop d*ata sources using a wizard for custom Data Collection*
    - *Agent can be packaged and is very configurable*
    - *Creates a 'Sellable' agent*
    - *More platform support*
    - *Support and Enhancements continue*

Planned Cognos Support

- Cognos support planned for future version of TSM 6.x for 2011

- *Cognos used as an alternative to BIRT*

- *Cognos can query directly TSM DB2 databases or the DB2 Warehouse*

- Cognos included in TSM 6.x installation

- No additional charges for TSM Reporting with Cognos

- Cognos cannot replace current ITM based Monitoring

- Current Reporting and Cognos will both be supported and coexist

Agenda

- IBM TSM Reporting and Monitoring

- **Thoughts on IBM Tivoli Monitoring (ITM)**
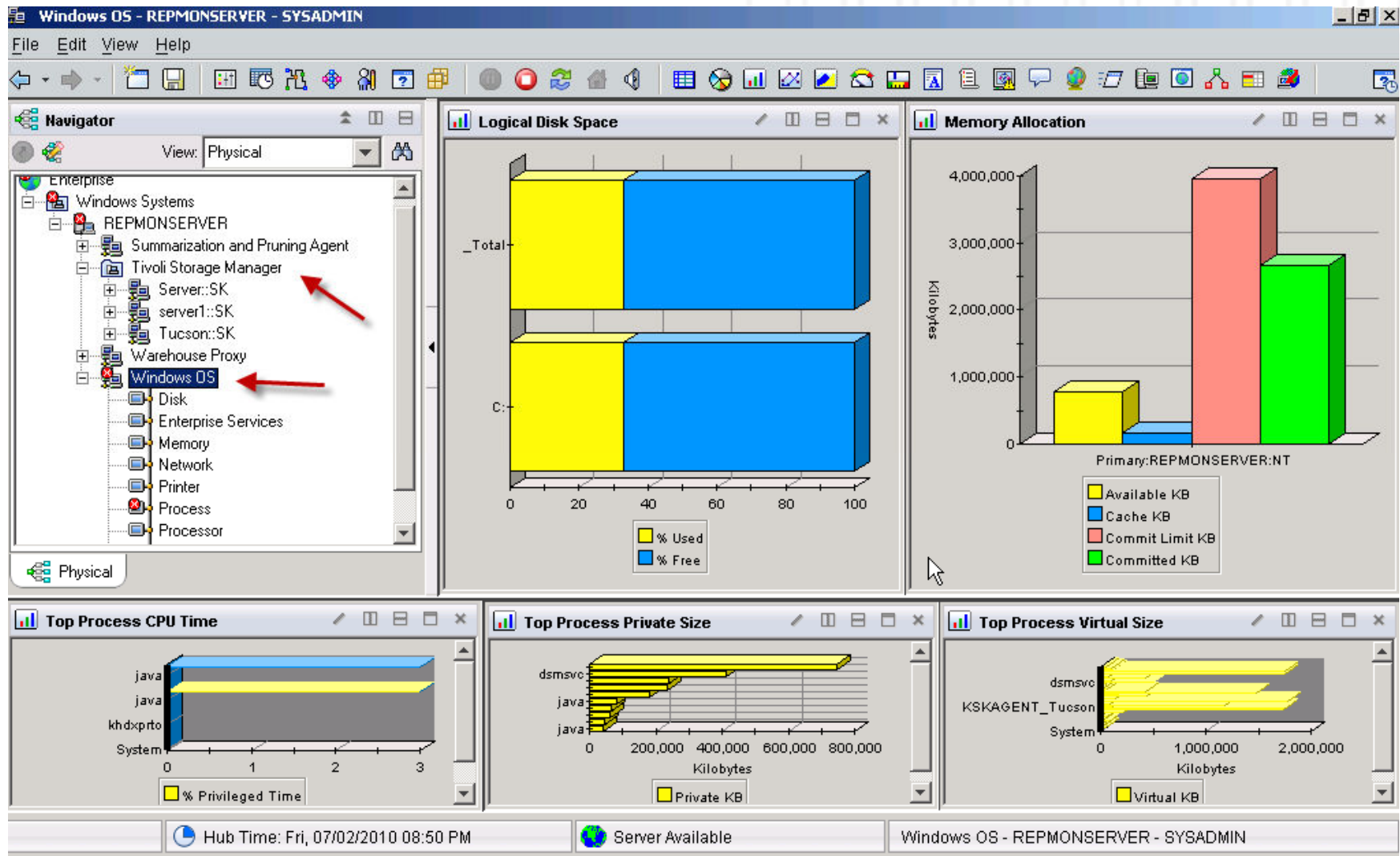
- IBM TSM FastBack Reporting

Thoughts on ITM

- TSM Monitoring and ITM complement each other

- Monitoring for complete IT Environments

- Various Agents available, e.g. Windows, AIX, HP-UX, Sun Solaris, MS Exchange, MS SQL Server, DB2, Linux, Energy, …

- Even TSM Reporting can be integrated into one Portal together with TSM Monitoring and other ITM Agents

- Perfect cross selling opportunity

- Complete sets of ITM enablement material and courses available

ITM Windows OS Agent

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Common Portal:
TSM Reporting/TSM Monitoring/Windows Monitoring

Agenda

- IBM TSM Reporting and Monitoring

- Thoughts on IBM Tivoli Monitoring (ITM)

- IBM TSM FastBack Reporting

Reporting and Monitoring for FastBack

- Integrated in TIP

- *Includes pre-defined Reports*

- *Custom Reports can be developed using BIRT*

- *Reporting only, no ITM Monitors/Agents included*

- *FastBack Reporting installation package includes all pre-defined Reports*

- Prerequisite: Tivoli Common Reporting 1.2 (includes TIP)

- No additional charges for FastBack Reporting

Reporting and Monitoring for TSM FastBack

1. Installation Step

- 1. Step: Install TCR 1.2 Installation Package
  - Includes TCR and TIP
  - If TIP or TCR are already installed, this step is not required

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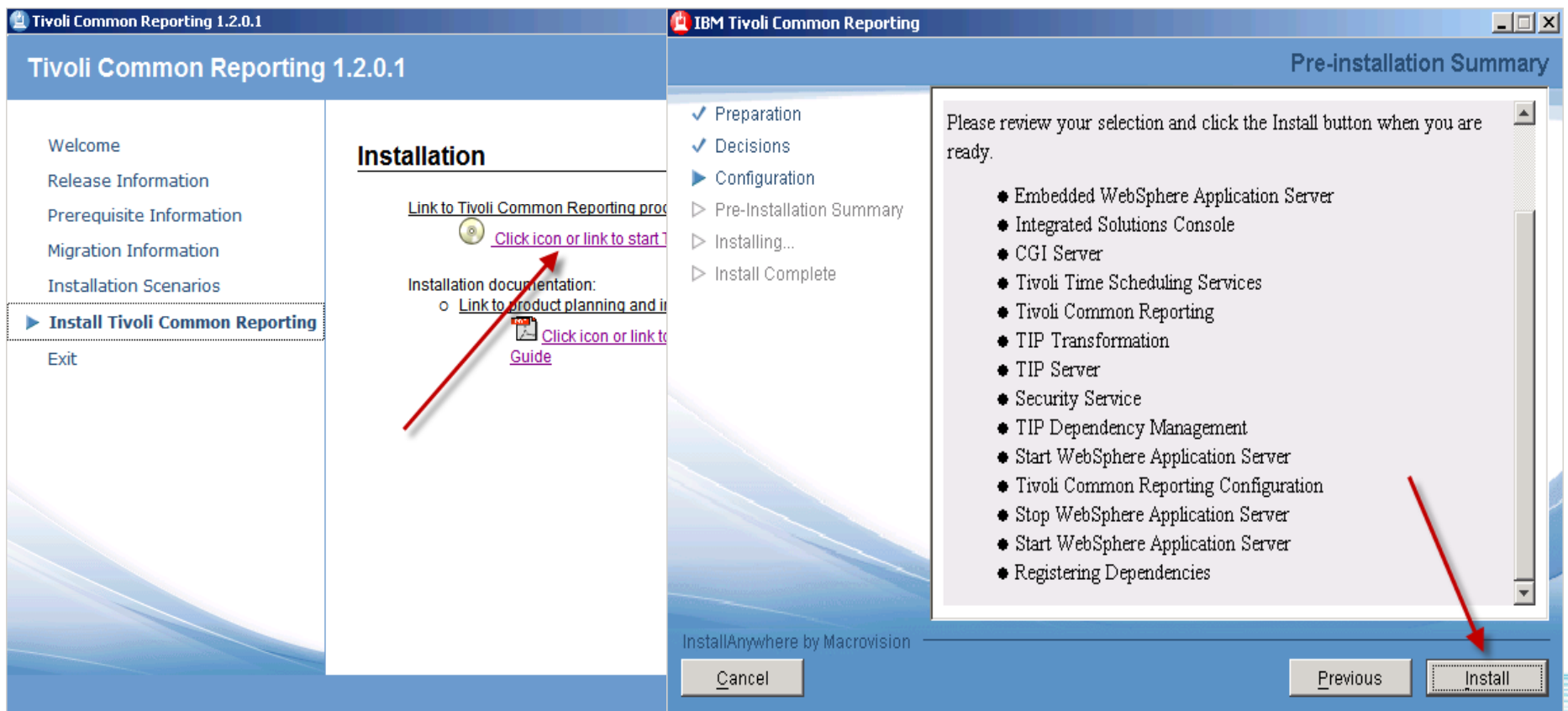
2. Installation Step

- 2. Step: Install TSM FastBack Reporting Package

  - Includes pre-defined Reports

  - Does not include TCR or TIP

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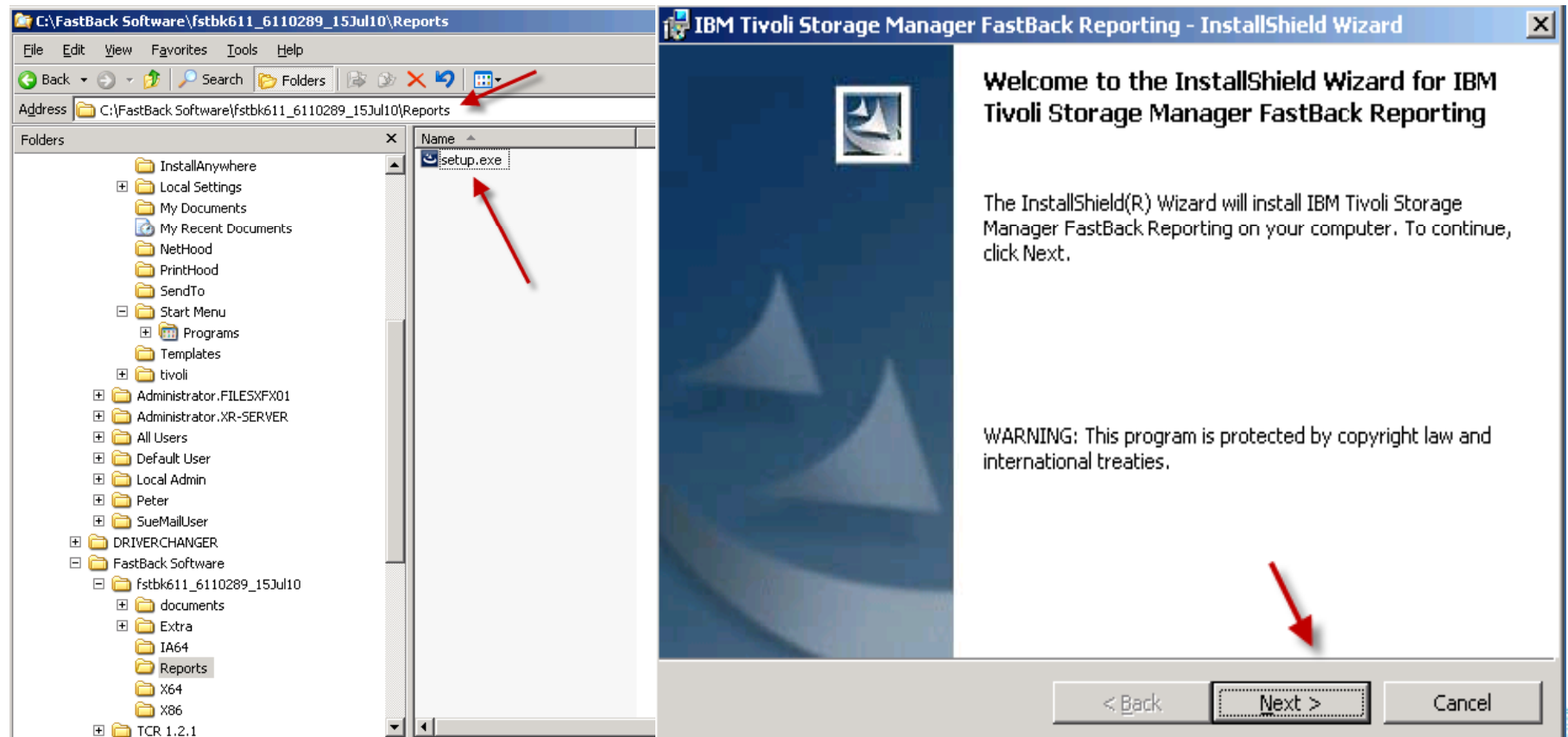
3. Installation Step

- 3. Step: Import Reporting Package
  - Unlike TSM, the Reports need to be imported

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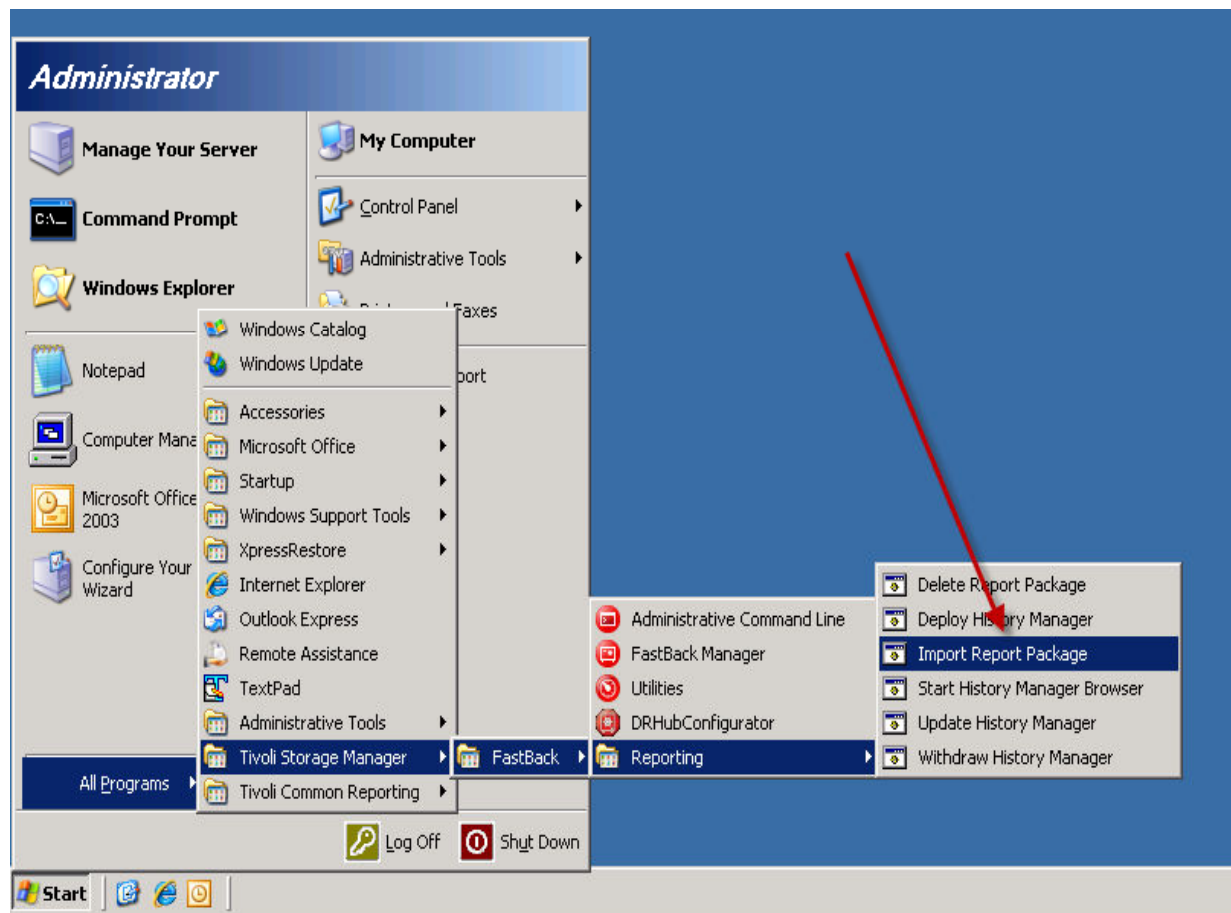
4. Installation Step

- 4. Step: Configure TSM FastBack Reporting in TIP
  - Configure the Data Source
  - Default Data Source is a Derby Database
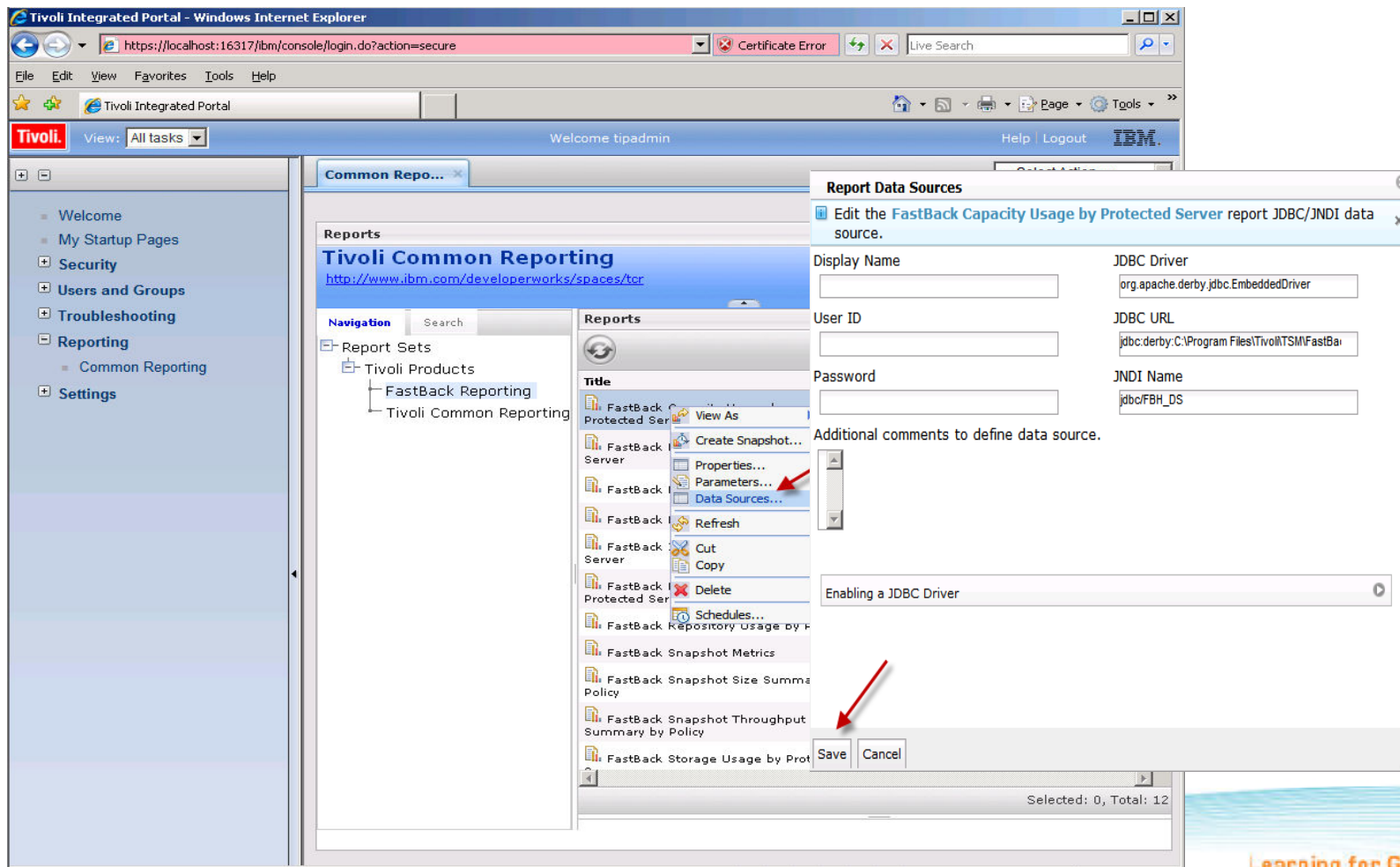
FAQ's

- How does a user see Reporting and Monitoring?

  -Reporting GUI is the TSM Admin Center (TIP)
  -Monitoring GUI is TEP

- Can Monitoring be installed without Reporting?
  -Yes

- Can Reporting be installed without Monitoring?
  -No

- Is it supported and downloadable for TSM 5.x Servers ?
  -Yes

- Can it be installed on the TSM Server ?

  -For TSM 5.x: Yes, but not recommended, due to resource consumption
  -For TSM 6: No, not supported, due to conflicting DB2 Versions
  -We recommend to install the standard TSM Admin Center and Reporting/Monitoring on the same server to manage multiple mixed TSM Servers

- Is it all in one installation package?
  -Yes, all required components (ITM,TEP,DB2, TSM Admin Center…) will automatically install

- What about the old TSM 'Operational Reporting'?
  -It will be discontinued – changes to TSM 6 are not compatible with Operational Reporting

- Is e-mailing build-into the product?
  -Not yet, it is under consideration for future releases

FAQ's

- Do I need extra licenses?

  -No, it is part of TSM Base/EE

- Do I need to write my own Monitors or Reports?

  -No, we deliver pre-configured Monitors and pre-defined Reports

- Can I write my own reports?

  -Yes, they can be developed with BIRT using Eclipse 3.3.1.1

- Can customers write their own reports?

  -Yes, but we recommend a service engagement, since BIRT is not trivial

- Can customers customize their own Monitors?

  -Yes, it's very easy in TEP

- Does it plug-into an existing ITM installation?

  -Yes, you can see TSM Monitoring as well as all other ITM Monitors (licensing required)

- Does it plug into an existing TSM Admin Center Installation?

  -Yes, we recommend to use one server for managing/reporting/monitoring TSM. It plugs into

- Can I monitor and report on multiple TSM Servers?

  -Yes, you can even monitor and report on different TSM versions

Where to get more information

- ERL: Storage related collection of links

  http://pokgsa.ibm.com/projects/e/erl/

- Xtreme Leverage: All sales related resources

  http://w3.ibm.com/software/xl/portal

- IBM Tivoli Demo Library

  http://depot.tivlab.raleigh.ibm.com/DemoLib.nsf/DemoIndexCat_w3

- IBM Tivoli Storage Manager Website

  http://www.ibm.com/software/tivoli/products/

- PartnerWorld: For Business Partners

  http://www-1.ibm.com/partnerworld/pwhome.nsf/weblook/index.html

- System Sales Site

  http://w3-1.ibm.com/sales/systems/portal/

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