TABLEAU CONFERENCE
Welcome
Tableau from an Enterprise IT Perspective

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Building, deploying, governing and working IT
Tuesday | 12:30 – 1:30pm | MCCNO – L2 – R02

Administrator’s toolbox: Building a Tableau utility server
Tuesday | 10:45 – 11:15am | MCCNO – L1 – Data Village – Story Points Theater 4
Overview
Objectives of this session

• What are the key areas for IT to focus on when deploying Tableau?

• How Tableau at Tableau looks like?

• What are some best practices for IT’s Tableau responsibilities?

By the end of this session, you will understand the impact of Tableau Server from an IT perspective.
Process & Platform

**Infrastructure**
- Architecture & Sizing
- Server configuration
- Upgrade management
- Performance monitoring
- Usage monitoring

**Outcome:** Maximize Performance

**Governance**
- License Procurement
- IT/User Workflows
- Content Publishing
- Content Management
- Server Administration

**Outcome:** Clear Processes

**Data**
- Data Source Strategy
- Data Extract Requirements
- Map Data Ecosystem
- Data Model
- Data Dictionary

**Outcome:** Confidence in Data

**Operations**
- Maintenance
- Backups
- Upgrades/patches

**Outcome:** Well Run Environment
Enterprise Architecture
Infrastructure

- Scalability
- Performance
- Availability
- Up-to-date
Scalable

Scale up - add more resources
Run more service instances if required
Scale out – add more worker nodes running some or all of the services
Performance

- When virtualising – dedicated resources
- Recommended Tableau Server specs
- Adapt configuration to usage
Availability

- Highly Available configuration
- Business Critical Use Case
- External load-balancer
Availability

- Disaster Recovery configuration
- Use one NON-PROD instance for DR
- Sync via Tableau backups
Up-to-date

- Q1
- Q2
- Q3
- Q4
Infrastructure

One configuration to rule them all?

Monitor and Analyze

Gather Data

Proactively adapt
How do you manage Tableau Server?

1. **Tableau Repository** to monitor server’s traffic
2. **TabMon** to monitor resource utilization
3. **TabJolt** to perform and automate load testing
4. **Logshark** to analyse your Tableau Server log files
A Real-World Example: Tableau’s Own Deployment
At a Glance

1.6 MILLION VIEWS PER MONTH
196 SERVER CORES
2,200 DESKTOP USERS
650 PUBLISHERS IN LAST 30 DAYS
200 BETA PARTICIPANTS
Worldwide Deployment
### US-based Production Server instance (A)

<table>
<thead>
<tr>
<th>Process</th>
<th>Primary</th>
<th>Worker 1</th>
<th>Worker 2</th>
<th>Worker 3</th>
<th>Worker 4</th>
<th>Worker 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluster Controller</td>
<td>✔️</td>
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<td>Gateway</td>
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<tr>
<td>Application Server</td>
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<tr>
<td>Cache Server</td>
<td>✔️ ✔️</td>
<td>★ ✔️ ✔️</td>
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<td>✔️ ✔️</td>
<td>✔️ ✔️</td>
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<tr>
<td>Search &amp; Browse</td>
<td>✔️</td>
<td>✔️</td>
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<tr>
<td>Backgrounder</td>
<td>✔️</td>
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</tr>
<tr>
<td>Data Server</td>
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</tr>
<tr>
<td>Data Engine</td>
<td>✔️</td>
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</tr>
<tr>
<td>File Store</td>
<td>✔️ ✔️</td>
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<td>✔️ ✔️</td>
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<td>✔️ ✔️</td>
<td>✔️ ✔️</td>
</tr>
<tr>
<td>Repository</td>
<td>✔️   Preferred</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>

- **16 cores each, for a total of 96 cores**
- **3 nodes dedicated to backgrounder processes**
Our Failover (or Upgrade) Approach
Governance
Why...???

Self-Service does not have to mean CHAOS
Governance

- Content Workflows
- Ongoing Content Management and Housekeeping
- Security & Auditing
- License Management
- Data Governance
IT Software Development

REQUEST
CLARIFY
PRIORITIZE
ASSIGN
DEV
TEST
UA
PRODUCTION
Content Workflows

SANDBOX

- Short Time to Live
- Ad-Hoc
- Quick Analysis
- Tests

EVERYONE R/W

PROMOTE

STANDARD

- Official
- Checked
- Validated
- Approved

SOME W

EVERYONE R
Content Workflows

Professional Services

Primary location for content specific to the Professional Services team.

Primary Project Owner: Abhishek Singh
ALPO Publishing Best Practices

Professional Services (sandbox)

Test location for content specific to the Professional Services team.

Primary Project Owner: Abhishek Singh
ALPO Publishing Best Practices
# Roles & Responsibilities

<table>
<thead>
<tr>
<th>Role</th>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DATA STEWARD</strong></td>
<td>Data curator&lt;br&gt;Understands data structure and content&lt;br&gt;Collaborates with wider IT &amp; Administration</td>
</tr>
<tr>
<td><strong>AUTHOR</strong></td>
<td>Content creator&lt;br&gt;Understands business requirements&lt;br&gt;Manages shared business logic</td>
</tr>
<tr>
<td><strong>CONSUMER/EDITOR</strong></td>
<td>Consumer of content&lt;br&gt;Ad hoc exploratory analyst&lt;br&gt;Drives innovation and ideas</td>
</tr>
</tbody>
</table>
# Security & Auditing

## Security

<table>
<thead>
<tr>
<th>Authentication</th>
<th>LOCAL</th>
<th>ACTIVE DIRECTORY</th>
<th>SAML/KERBEROS/OPENID</th>
<th>TRUSTED TICKETS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authorization</td>
<td>SITE ROLE</td>
<td>DEFAULT 6 CUSTOM PERMISSIONS</td>
<td>INHERITANCE &amp; OVERRIDE</td>
<td></td>
</tr>
<tr>
<td>Data Security</td>
<td>DATABASE USER &amp; SERVICE ACCOUNT</td>
<td>CONTENT PERMISSIONS</td>
<td>RLS</td>
<td></td>
</tr>
</tbody>
</table>

## Auditing

<table>
<thead>
<tr>
<th>Logshark</th>
<th><a href="https://github.com/tableau/Logshark">https://github.com/tableau/Logshark</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Repository</td>
<td>BUILT-IN-ADMIN VIEWS</td>
</tr>
</tbody>
</table>
License Management

- Monitor Tableau Server Licenses in Portal
- Configure Tableau Desktop License Tracking
Governed Data – Data as a Service

Desktop / Browser / Mobile

Tableau Server

Tableau Data Source

Tableau Data Source

Tableau Data Source

Data Source
## Semantic Layer

<table>
<thead>
<tr>
<th>Name</th>
<th>Views: All</th>
<th>Workbooks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales Opportunity</td>
<td>225,961</td>
<td>680</td>
</tr>
</tbody>
</table>

[Diagram of hierarchy: Opportunity -> Channel Manager, Opportunity Owner, Opportunity Territory, Partner Account, Sales Area Manager, Sales Consultant]
Sales Opportunity Data Source

The Sales Opportunity Data Source is the one-stop shop for Sales pipeline analysis. Not only does it include information on accounts and opportunities, but it adds the granularity required to do product level analysis, along with the data needed to roll-up by territory. This data source contains opportunity splits as well. For Quota attainment figures, please use the Quota Attainment dashboard on ALPO.

To Use

Create a New Viz on Server

Create a New Viz in Desktop

1. Connect to Data
2. Connect to Tableau Server
3. Connect to Data Source

About this Data Source

Intended Audience: Sales
Connection Type: Live
Raw Tables: Account, Territory, Opportunity, User
ALPO Tables: ALPO_ProductMaster
Where to publish your data source?
Published Data Source Checklist

- Filtered and sized to the analysis
- Use business-friendly naming conventions
- Set data types
- Create hierarchies
- Apply formatting (dates, numbers, currency…)
- Set FY start date, if applicable
- Add new calculations
- Remove duplicate/test calculations
- Enter comments
- Aggregate to highest level
- Hide unused fields
- Publish to Tableau Server
The certification badge and notes indicate a Certified Data Source so that users will know the data can be trusted.
Operations
Backups

Your Tableau Server represents months or years of labor – protect the investment with scheduled nightly backups!

• On Tableau Server 2018.2 and up, run:
  • tsm maintenance backup -f <backup_file> -d
  • tsm settings export -f <filename>.json

• On Tableau Server 2018.1 and prior, run:
  • tabadmin backup -v <backup file>

• Store multiple backups over time in a SAN/NAS share:
  • 7 nightly backups
  • 4 week-end backups
  • 12-14 month-end backups
Streamline Tableau Server and reduce disk space consumption by periodically running a cleanup operation (ideally, at least once per month if not once per week)

• On Tableau Server 2018.2 and up, run:
  • `tsm maintenance cleanup all` (once with server running and again with it stopped)

• On Tableau Server 2018.1 and prior, run:
  • `tabadmin cleanup` (once with the server running and again with it stopped)

• Weekly or monthly cadence is fine
Ongoing Content Management & Housekeeping

- Automatically clean-up/archive content from Sandbox
- REST API Automation
- Tableau Repository
- Emails
Upgrades & updates

1. Agree upgrade pace with business users
2. Plan, resource and communicate the upgrade
3. Keep Desktop and Server versions aligned
4. Non-Prod instance for upgrade testing
Summary
What did you learn in this session?

- **Architecture:** What a Tableau Server deployment looks like
- **Governance:** How IT manages Tableau
- **Data Sources:** The key best practices
- **Operations:** The main tasks from IT’s daily maintenance checklist
Resources

- Redefining the role of IT in a modern BI world
- The Critical Role of the IT Group in Self-Service Analytics
- Tableau Server Scalability – Introductory overview to scaling Tableau Server across your enterprise
- Hardware Planning and Server Configuration for Enterprise Tableau Deployments
- Developing a Governed Self-Service BI Strategy
- Governed Self Service Analytics at Scale: An Overview
- Enabling Governed Data Access with Tableau Data Server
- Tableau Server Platform Monitoring
- Tableau Server Platform Security
- Tableau Server on VMware Vsphere
- 7 signs you need self-service reports & what's in it for IT
- Tableau Developer APIs (Document API, Extensions API, REST API, and more!)
Please complete the session survey from the My Evaluations menu in your TC18 app.
Questions?
Thank you!

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