THIRD LARGEST US DENTAL INSURANCE COMPANY INCREASES TABLEAU ADOPTION, MAKES 500+ USERS SELF-RELIANT IN ANALYTICS

# CUSTOMER SUCCESS STORY

## USEReady

ANALYTICS  |  DATA  |  SECURITY

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## SUMMARY
Implemented a governed security architecture utilizing Tableau Server and SSO for seamless sharing of analytics content with internal and external users.

## PROBLEMS
Client needed an integrated, cost-efficient solution which would enable seamless data sharing, dashboard deployment and implementing governance architecture for better controls and accountability.

## SOLUTIONS
Departments became data-driven and data security prevented breaches and threats. Extended Team model was leveraged to provide cost-effective, hands-on solution for analytics projects.

## BENEFITS
Established governance for safe democratization of data. Costs reduced by 20% and TAT reduced by 60%.

### Overview
Third largest US dental insurance company wanted to implement a secure architecture so that users are empowered to access relevant analytics content while enforcing protection against breaches and other threats.

### Challenges
**Problems with Data Sharing**
Multiple third-party contractors were assigned the task of deploying a Single Sign-On using Site-Minder. However, they were having difficulty in integrating the different authentication sources for internal and external users. They were also facing challenges in implementing a solution to establish permission levels depending on user functions/ roles/ departments.

**Low Productivity**
Lack of coordination and communication between the contractors as well as the internal teams resulted in low productivity. Internal IT team had to handle multiple back and forth requests which caused a lot of delay.

**Poor Turnaround Time**
Infrastructure, resources and communication problems had already delayed the implementation. Internal deadlines were missed. There was no clear timeline when the solution will be delivered.

**Budget Constraints**
A large number of third-party contractors had already been hired for multiple analytics projects, because of which the client was on a tight budget. They needed a solution that provided round-the-clock support for their various projects, that was cost efficient and optimized.

**Need for a Governance Architecture**
There was a need for an integrated solution which would enable seamless data sharing and dashboard deployment, and at the same time ensure governance for better controls and accountability.

### Solution
**Application Development**
USEReady team architected an identity and access management solution to control access and enable user management by the

administrator, that best fitted the client's dynamic business needs.

This solution offered a seamless single sign-on experience to the users while managing user's privileges to ensure that they access only authorized applications. A web application was developed to host Tableau Dashboards and separate modules were created for data security and user management.
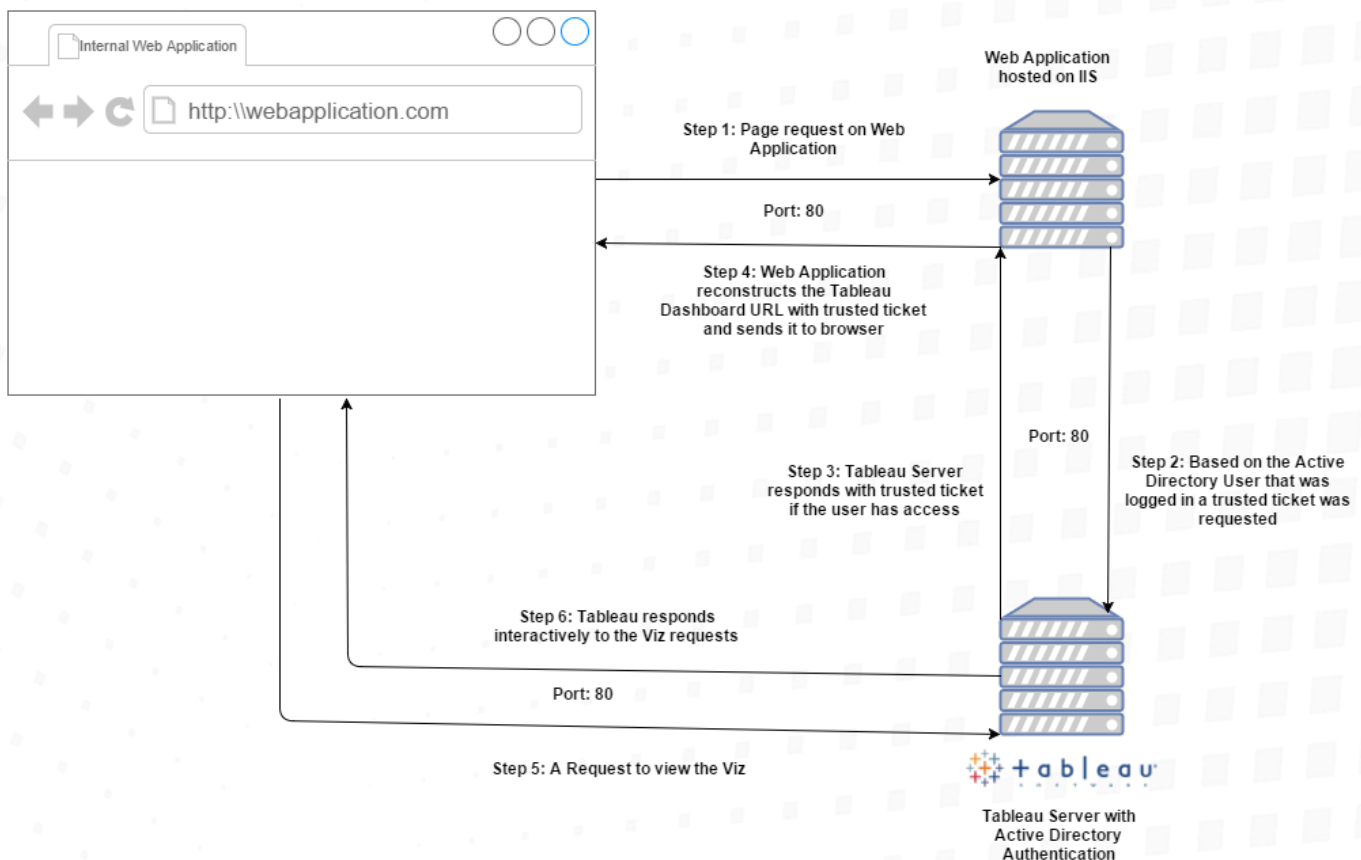
### Tableau Server Setup

Organizations become data-driven when all the departments become self-reliant in analytics and there is democratized, governed access to data. To enable SSO, USEReady consultants reinstalled Tableau

Server changing the authentication from Active Directory to Local Authentication. Tableau Server was configured on a single node of 8 cores for supporting larger number of concurrent users, including read-only users and interactors, as well as both complex and moderate workloads.

### SSO for User Authentication & Access Management

Using SiteMinder and Tableau Trusted Authentication, single sign-on was implemented so that Tableau Server could recognize which user had logged in and provide the relevant dashboards. These permission levels were established depending on user function/roles, departments.

## BEFORE



Internal Web Application

http:\\webapplication.com

Web Application hosted on IIS

Step 1: Page request on Web Application

Port: 80

Step 4: Web Application reconstructs the Tableau Dashboard URL with trusted ticket and sends it to browser

Port: 80

Step 2: Based on the Active Directory User that was logged in a trusted ticket was requested

Step 3: Tableau Server responds with trusted ticket if the user has access

Step 6: Tableau responds interactively to the Viz requests

Port: 80

Step 5: A Request to view the Viz

tableau

Tableau Server with Active Directory Authentication

## Integrated different authentication sources for internal and external users

Internal users were authenticated against Active Directory and external users were authenticated through SiteMinder credentials. This logic was implemented as part of the web application development. Tableau Server stored the email addresses of both internal and external users and a trusted ticket was generated for user who logged in using email addresses.

## Integrated IIS, Tableau Server with Data Security

The web application was hosted in IIS Server. Data security was implemented based on the filters and parameters used while building the Tableau Dashboards. These parameters were passed by the logic implemented in the web application.
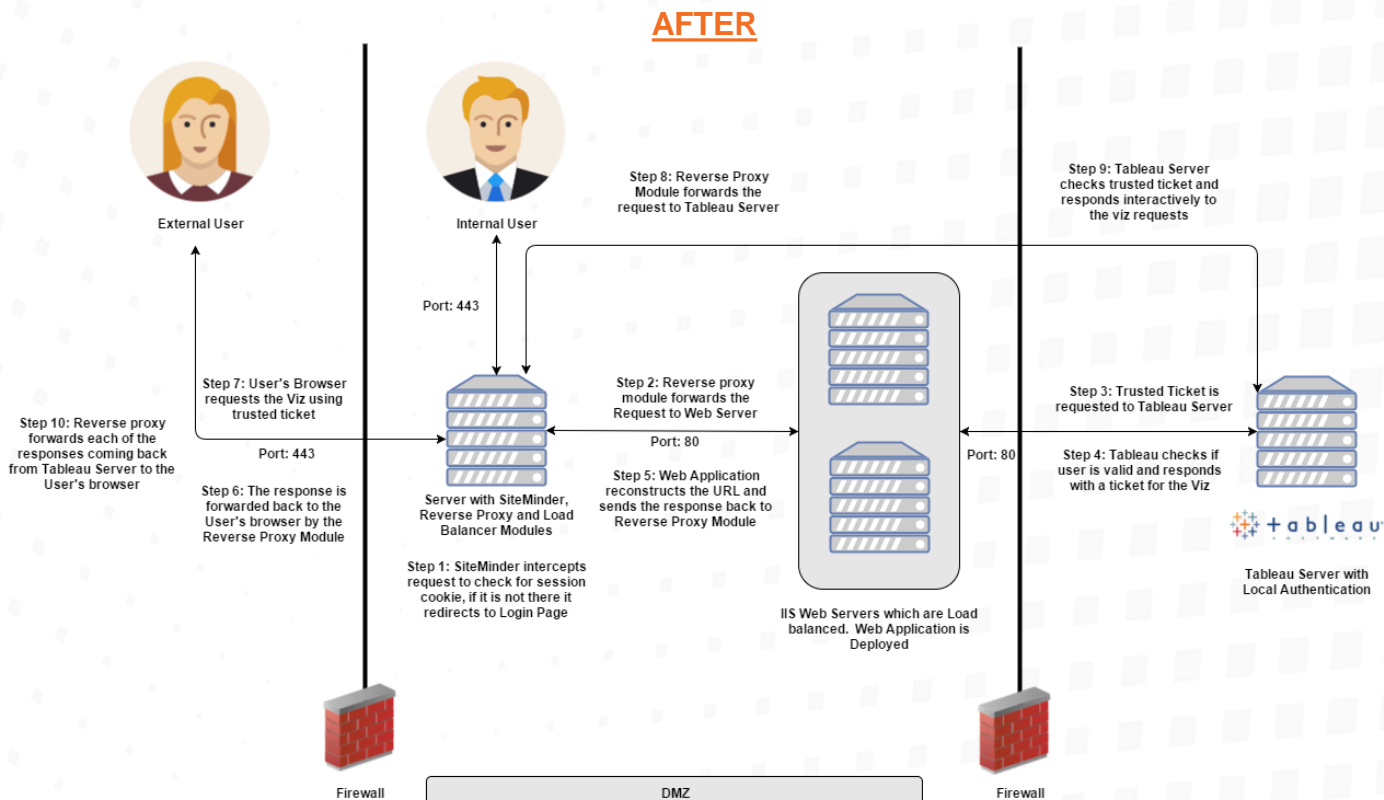
SiteMinder Authentication along with

reverse proxy module was introduced so that the machine information of Tableau and Web Application was not exposed to the external world. SSL Certificates were installed on the Load Balancers for encryption.

## Performance Tuning

Once Tableau Server was set up, load testing was performed to assess the scalability of Tableau Server to support up

### Results

- Scaled up Tableau Server to be used by 500 users
- Established governance for safe democratization of data
- Operational costs reduced by 20% by utilizing our expert help desk
- Deadline extensions and delays reduced by 60%

## AFTER



External User

Internal User

Step 8: Reverse Proxy Module forwards the request to Tableau Server

Step 9: Tableau Server checks trusted ticket and responds interactively to the viz requests

Port: 443

Step 7: User's Browser requests the Viz using trusted ticket

Step 2: Reverse proxy module forwards the Request to Web Server

Step 3: Trusted Ticket is requested to Tableau Server

Port: 443

Port: 80

Port: 80

Step 4: Tableau checks if user is valid and responds with a ticket for the Viz

Step 10: Reverse proxy forwards each of the responses coming back from Tableau Server to the User's browser

Step 6: The response is forwarded back to the User's browser by the Reverse Proxy Module

Server with SiteMinder, Reverse Proxy and Load Balancer Modules

Step 5: Web Application reconstructs the URL and sends the response back to Reverse Proxy Module

+ableau

Tableau Server with Local Authentication

Step 1: SiteMinder intercepts request to check for session cookie, if it is not there it redirects to Login Page

IIS Web Servers which are Load balanced. Web Application is Deployed

Firewall

DMZ

Firewall

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to 500 concurrent users. Dashboards were load tested using **Tabjolt** to test the existing dashboards. Load testing was performed using 25 and 50 concurrent users for the existing dashboards. The expected number of users who are going to use the application were 250 to 500.

## Operational Effectiveness

The team ensured operational effectiveness and cost-efficiency by working off site and maintaining an issue-log to track the ownership of each piece.

USEReady team set up a communication process and ownership of tasks enabling contractors involved in the projects to be on the same page.

## Expert Help Desk

Because of the number of third-party contractors hired for various deployments, the client was on a tight budget. USEReady team leveraged the remote help desk model and offered round-the-clock, hands-on support for analytics projects. Utilizing this model, we enabled them to resolve their issues quickly and implemented solutions quickly and cost-efficiently.

## Trainings, Guidelines

USEReady consultants provided guidelines for dashboard optimization based on the load testing of dashboards. Documentation was also provided for the architecture and deployment process along with best practices.

*"With USEReady, it is a very refreshing and motivating approach. They have deep knowledge of data warehouse, integration, and deployment of servers, agile analytics, governance oversight, data access monitoring - giving the right user the right access at the right time."*

– Manager, IT Department, Dental Insurance Company

## ABOUT USEREADY

USEReady is a leading provider of advanced business intelligence, data management, and network security solutions. Our mission is to help businesses succeed by fast-tracking their business performance - through our industry, domain and technology expertise, agile global delivery practices, and our customer fanaticism. For more information, visit: www.useready.com

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