



On-Demand Setup Guide

V 1.0

Contents

1. What is Teranet Xchange?	3
2. How does it work?	3
3. Teranet Xchange enhanced security features	5
4. How do I get started?	6
5. Frequently Asked Questions	7

1. What is Teranet Xchange?

Teranet Xchange is the new data delivery tool that facilitates a smooth customer experience while delivering critical data from Teranet to the customer. The tool offers two update options: **Website Download** and **On-Demand Update**.

With the **Website Download Option**, the customer will be able to access Teranet.ca via a secure login credential, and download data according to a pre-defined schedule. The data will be provided in the pre-specified format, i.e. .shp, .txt, etc. Each update will contain data in the customer's entire geographic coverage.

The **On-Demand Update Option** enables the customers to receive real-time updates at a database-to-database level. After the initial data load, the update will only need to occur when and where a change has taken place. The customer will be able to control the frequency of the data update based on their own organization's unique needs. As a result, the customer will be able to receive the most up-to-date land registry and land related data whenever it is required.

The information below outlines the steps to set up the Teranet Xchange On-Demand Update option.

2. How does it work?

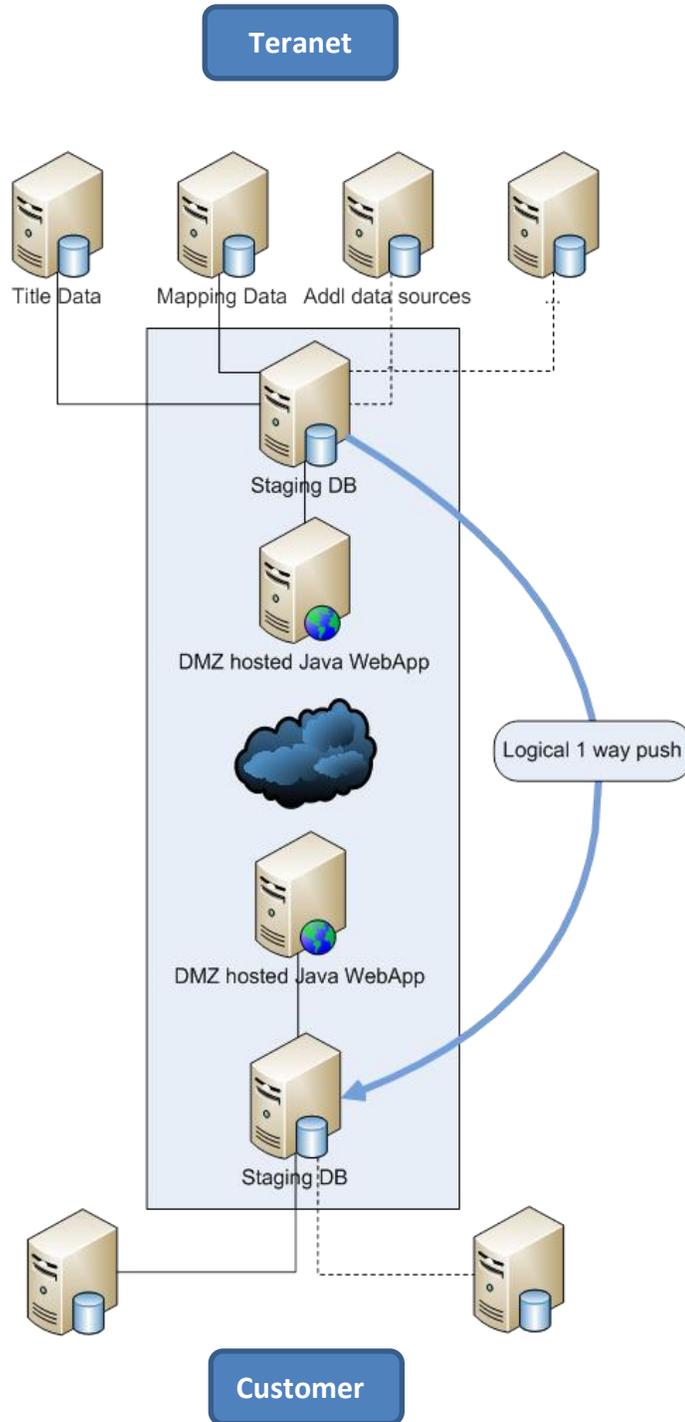
Teranet Xchange leverages an open source product, SymmetricDS, to facilitate real-time data synchronization between Teranet and the customers across the network in a heterogeneous environment. By using database triggers, SymmetricDS guarantees that data changes are captured and atomicity is preserved. <http://www.symmetricds.org/>

SymmetricDS can either be installed as a separate application or, if desired, deployed as a standard WebApp to any JEE container, including Tomcat, Weblogic & Websphere.

Teranet Xchange offers a customer-driven, pull update mode. The customer can customize the data update frequency and time frames through batch processes, or receive real-time update by default.

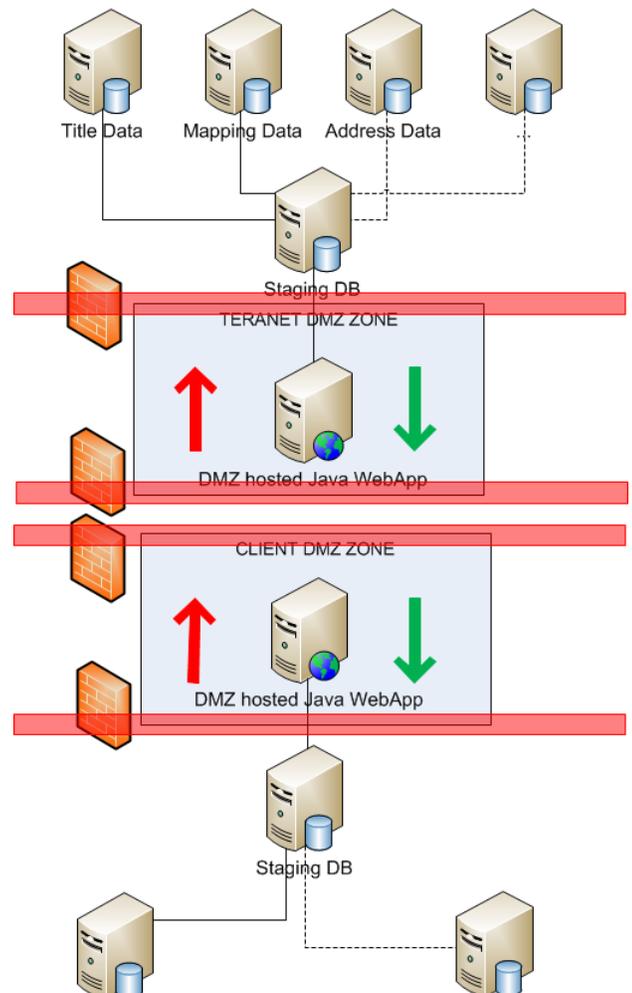
Teranet Xchange On-Demand Setup Guide

The System design is illustrated as follows:



3. Teranet Xchange enhanced security features

- All traffic between Teranet and the customers will leverage the latest SSL encryption techniques as well as forcing end users to have unique IDs and Strong passwords.
- Using a push / pull update model, SymmetricDS follows industry accepted best practices regarding how best to transfer data between organizations.
- Teranet Xchange is based on a multi-tiered structure, where communication and data storage are handled in separate environments. The diagram below depicts this configuration. In the unlikely event of a system being compromised in any way, the source data will not be accessible by unauthorized personnel.
- Client initiated 'control channel'. Firewall can better protect internally initiated connections.
- Servers in different zones eliminate the need for wide open rules and instead allows for minimal changes to each firewall.
- Leveraging web protocols allows firewalls to be more aware of the data being sent and better suited to detect a risk.



4. How do I get started?

1. System requirements:

DMZ Server	Database Server
<ul style="list-style-type: none"> ○ 4 GB Memory ○ 20 GB free Disk 	<ul style="list-style-type: none"> ○ 8GB Memory ○ 1TB for any client receiving all Teranet data. 200 GB should suffice for any client receiving a single LRO of data

2. Customer information required:

- Input Geometry (.shp)
- Customer DB environment

3. Setup process:

1. Teranet sets up Symmetric on the customer's DMZ server (via remote access or in person)
2. Teranet assists with the initial data load onto the customer's Staging server
3. Teranet Xchange takes care of the ongoing Update
4. Teranet monitors the data update progress and communicate with customers regarding the progress where required

5. Frequently Asked Questions

What database environments is Teranet Xchange compatible with?

- Teranet Xchange is DB technology agnostic for most customers. Through SymmetricDS, It works with most operating systems, file systems, and databases, including Oracle, SQL Server, PostgreSQL, etc.

How is the spatial data (parcel geometry) stored and retrieved from the database?

- Over the wire the geometry is sent in wkt format. As a result the data delivered is stored in a text field. A client side trigger facilitates the last bit to convert the wkt back to a native geometry in the customer's data store.

How will security credentials be passed, i.e. token?

- All data transfer will be encrypted using https. The endpoint on the Teranet end is <https://www.teranetXchange.ca>

How much time does it usually take to set up the system?

- Typically it takes about half a day to setup the infrastructure and about 8 – 10 hours for the initial DB Synchronization.

Is support available after installation?

- SymmetricDS is a Teranet licensed product. All support for this product will be provided by Teranet.
- The customers are responsible for their own database environment, availability, backup and any server related activities.