

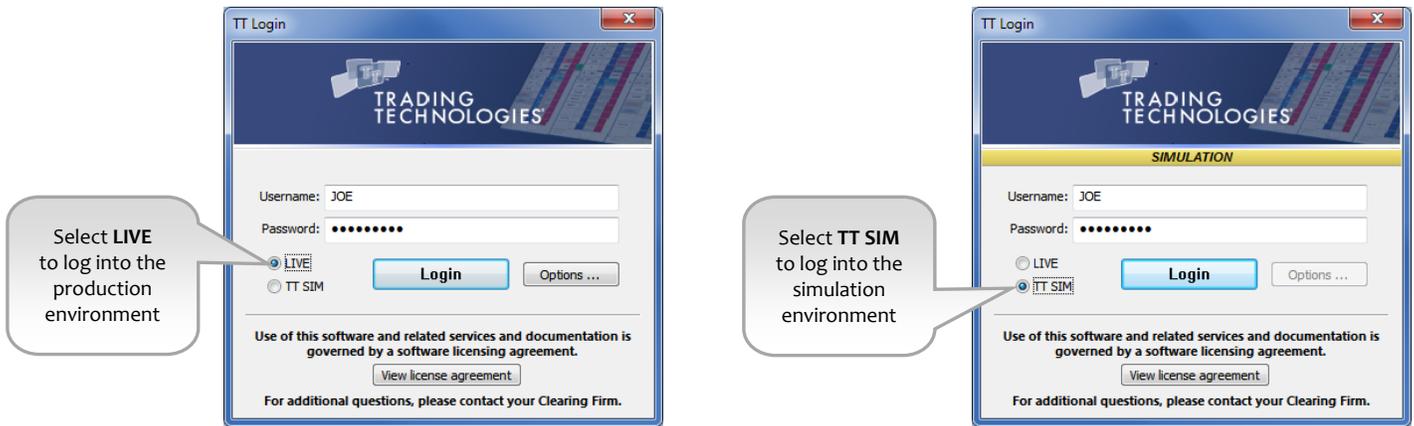
TT SIM™ with X_TRADER®

This quick reference guide describes how to use TT SIM version 7.16.1 (and higher) functionality with X_TRADER.

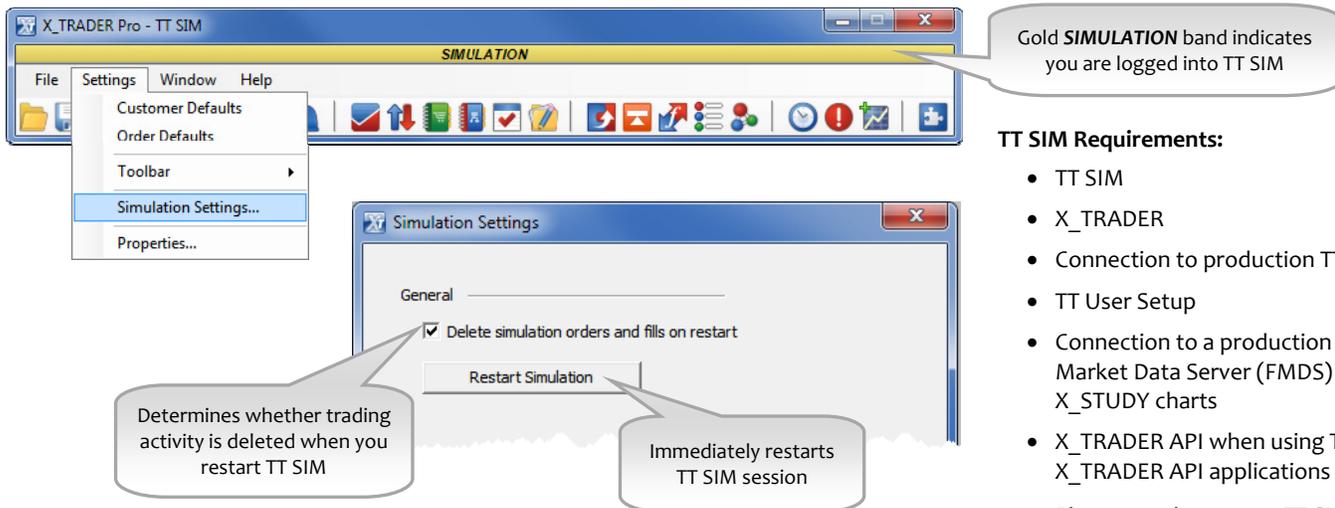
TT SIM provides an environment to learn X_TRADER, verify API solutions, and test custom trading logic against a live production price feed combined with a simulated matching engine running locally on the X_TRADER workstation. While running in TT SIM mode, users have access to full X_TRADER Pro functionality, including ADL™, Algo Strategy Engine, Synthetic Strategy Engine, X_TRADER API, and TT API, even if they do not have an X_TRADER Pro license.

TT SIM is a separate application and requires no additional configuration on the X_TRADER workstation. When TT SIM is installed, the **TT Login** dialog box displays two radio buttons allowing the user to log into either the production or simulation trading environment. Each option authenticates the **Username** against the user's login credentials in TT User Setup and downloads the user's product and risk information after **Login** is clicked.

Note: The **TT SIM** button is grayed out and unavailable if TT SIM is not installed on the workstation.



X_TRADER can only operate in one mode at a time (LIVE or SIMULATION). To change modes, simply exit and log back into X_TRADER. A gold **SIMULATION** band similar to the example shown below displays when operating in **TT SIM** mode.



TT SIM Requirements:

- TT SIM
- X_TRADER
- Connection to production TT Gateways
- TT User Setup
- Connection to a production Financial Market Data Server (FMDS) if creating X_STUDY charts
- X_TRADER API when using TT SIM with X_TRADER API applications

Please see the current TT SIM release notes for specific software requirements.

Resetting Simulation Trading Activity

By default, all simulation trading activity is deleted when the user restarts TT SIM. This clears the user's order book and resets their order and fill activity.



Closing X_TRADER does not delete simulation trading activity.

Saving Simulation Trading Activity

To save simulation activity from the current TT SIM session, uncheck the **Delete simulation orders and fills on restart** option.



To avoid disconnects and to help ensure proper TT SIM functionality, turn off any power save or hibernation functionality on the workstation.



Operating in TT SIM Mode

TT SIM Services: TT SIM starts components that mimic TT Gateway server behavior when the user logs into the simulation environment. Each of these components operates a separate Windows service that runs locally on the X_TRADER workstation.

Guardian: In Guardian, the Algo SE server (and all TT Gateways) display the IP address of the local X_TRADER workstation.

Market Updates: Instrument definitions and market data come from live production gateways. TT SIM receives real-time prices from the live production TT Gateways, including implied prices distributed by the exchange. TT SIM updates the local market data display by merging the production market data with the user's orders entered in the simulation market.

Simulated Trading After Market Close: Users can continue to trade in simulation mode after the market close if they are logged into TT SIM prior to the close and subscribed to the products that they want to trade. Market data will be based upon the last snapshot of the production market received from the exchange and the user's orders entered into the local simulation market.

To create custom markets...

1. Create unique accounts using the **Customer Defaults** window.
2. Open a **MD Trader** window for the market you want to trade.
3. Enable **View My Orders Only** and **Filter by Customer Account** from the **MD Trader** right-click context menu.
4. Right-click the **MD Trader** window and select **Clone** to create a copy of the selected window.
5. Select a different account in the **Customer** drop-down list in each **MD Trader** window.
6. Repeat steps 2 through 5 for each market that you want to trade and begin trading.

Supported Order Types:

- Limit
- Market
- Fill or Kill (FOK)
- Immediate or Cancel (IOC)
- Stop Limit
- Stop Market
- Minimum Volume
- All Synthetic Orders Types



The user's simulated orders never leave the local workstation and cannot be shared with other users.

Spreads: TT SIM supports the trading of calendar spreads. Users must subscribe to the underlying products before submitting spread orders.

Strategies: TT SIM does not support user-defined strategy creation. User's may view and trade strategies that have already been created in the production market.

Algos: TT User Setup credentials to the simulated Algo SE server are not required to deploy and test algos in simulation mode. Users cannot share algos, however, **Algo Explorer** may display algos persisted by another user who previously used that X_TRADER workstation in TT SIM mode.

TT SIM Matching Engine matches user's orders entered into the simulation market against production prices or the user's resting orders in the simulation market. Pro-rata matching for specific products is supported beginning with TT SIM 7.16.1. Products that do not support pro-rata matching are matched on a First In, First Out (FIFO) time/priority basis. See the TT SIM Feature Guide for specific matching rule details.

X_STUDY Charts: Simulation trading activity will be reflected on X_STUDY charts until the user restarts TT SIM and clears trading activity or switches to production mode.

Audit Trail: By default, the **Audit Trail** and other logs generated while in simulation mode are written to the `tt\logfiles\sim` folder.

Unsupported functionality:

- Detailed depth
- Strategy creation
- Staged orders
- Wholesale/Block trades
- Inquire on working orders
- Request for Quotes (RFQ)
- Recording/Replaying market data
- Exchange-specific order types (e.g., Market to Limit orders on Osaka Securities Exchange (OSE))

TT User Setup Configuration

- The **TT SIM login allowed** parameter allows the user to trade in TT SIM mode; the **Non-TT SIM login allowed** parameter allows the user to trade in LIVE mode.
- TT SIM utilizes the user's TT User Setup credentials to determine available products and risk limits. Users can have different markets, products, and credit limits that apply only to TT SIM. For example, the **Override credit for TT SIM** parameter sets a different credit limit for TT SIM mode.



TT SIM does not support product limits configured with wildcards (*). A custom configuration may be required which lists specific product types (e.g., FUTURES) and specific products (e.g. ES) to trade in simulation mode.