



**TRADING
TECHNOLOGIES**

RISK MANAGEMENT IN ADL FREQUENTLY ASKED QUESTIONS

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Risk Management in ADL®

Frequently-asked Questions

What is ADL and how is it related to the Algo Strategy Engine?

The ADL visual development environment, introduced in X_TRADER 7.11, allows non-technical users to develop sophisticated trading algorithms without complicated programming. The user-defined ADL algorithms run on the Algo Strategy Engine (Algo SE), which is a high performance server running on the Trading Technologies platform. To run an ADL algorithm, it must first be deployed to an Algo SE Server.

Is risk checking applied to ADL strategies?

Yes. Automatically, all risk limits that are configured for a user in TT User Setup are also applied to any ADL strategies run by that user. For example, assume a user has a maximum position limit of 10 for a given product. This user executes orders via MD Trader in X_TRADER, and also via his own ADL strategy. Any order that could potentially increase this user's aggregate long or short position beyond 10 in the specified product would be rejected - this includes orders executed from MD Trader in X_TRADER, as well as orders executed from the deployed ADL strategy.

The major risk controls that can be configured by a risk administrator within TT User Setup are as follows:

- **Allow Trading:** Control whether a user is enabled to submit orders.
- **Credit:** Control the amount of money a user can lose. Margin and additional margin values are also configurable, and can be applied as part of this check.
- **Tradable Products:** Control which products and product types can be traded.
- **Maximum Order Qty:** Per product, control the maximum size of any single order.
- **Maximum Position:** Per product, control the worst-case maximum long or short positions that can be achieved at the product and/or contract level. Additionally, the worst-case sum of all long and all short contracts can be limited per product.

For information about managing user risk, refer to the *TT User Login and Risk Administration Reference Manual*.

Are there additional things I can do as an administrator to control risk management in ADL?

Most customers will manage ADL user risk using the standard risk management already built into TT User setup. However, if additional risk checking of ADL strategies is required, an administrator has the following options:

- Since product limits are defined per TT gateway in TT User Setup, additional gateways can be installed specifically for ADL use. For example, a user can be configured to connect to a EUREX-A gateway for X_TRADER use, and to a EUREX-B gateway for running ADL strategies. In this case, the Algo SE server that the trader connects to can be configured for EUREX-B, only. Given this setup, the trader can only deploy ADL strategies for EUREX-B, and the trader's EUREX-B product limits can be configured more strictly.

Note: This only works if the `RiskPLChecking` flag is turned off on the Algo SE **Note:** server. Therefore, credit risk cannot be applied to ADL strategy orders if using this method.

- You can configure a second Username for a trader and grant that Username ADL permissions and stricter risk limits. The trader's original Username is not configured with ADL permissions and retains its original risk limits.

Note: This method may not be ideal because Username is sometimes used as a trader's unique identifier - either to TT for Transaction Billing purposes (if applicable), or to a given exchange.

- In TT User Setup 7.17 and higher, risk administrators can now choose, per user, which accounts can be used for ADL. This allows the administrator to, for example, configure stricter limits for accounts that will be used for ADL.

Can additional risk checking be applied to ADL strategies?

ADL Risk Blocks can be embedded within strategies to impose instance-specific risk limits. The Risk Block is used to impose multiple pre-trade risk checks that are specific to the algorithm instance that contains the Risk Block. If any of the following risk checks are violated, the Risk Block will reject the order submission and pause the algorithm.

These risk blocks allow the following limits to be defined per ADL strategy:

- **Maximum Order Quantity**
- **Maximum Position**
- **Maximum Loss**
- **User-Defined Condition**

For information about using the ADL RISK Block, refer to the *ADL User Guide*.

Can users be prevented from deploying ADL strategies?

Yes, an administrator must enable the **Algo Deployment Allowed** option in TT User setup to enable a user to deploy ADL strategies. This can be configured per Algo SE server. In some cases, it would be beneficial to allow only a risk administrator to deploy ADL strategies, as to control which strategies are available, on which Algo SE servers, and for which user(s).

Can users be prevented from sharing ADL strategies?

Yes, an administrator must specifically enable the **Algo Sharing Allowed** option in TT User setup to enable a user to share ADL strategies. With this setting enabled, a user can share strategies with other users that share the user's order book. This can be configured per Algo SE server.

<p>Can users be prevented from running ADL strategies?</p>	<p>Yes, in order for users to run ADL strategies on a specific Algo SE Server, each user must have valid login credentials established in TT User Setup for that Algo SE Server.</p>
<p>Can two ADL strategies from the same user be prevented from trading with each other?</p>	<p>Yes, this can be enforced by checking the Avoid orders that cross setting in TT User Setup. This is a per-user setting and it is enforced by the Algo SE server.</p>
<p>Can users or risk administrators test ADL strategies prior to deploying them for production use?</p>	<p>Yes, in TT User Setup, users can be enabled to run in TT SIM mode, or if desired, can be forced to run only in TT SIM mode. TT SIM allows users to test strategies in simulation using real production products and prices.</p> <p>For information about using TT SIM, refer to the <i>TT SIM Feature Guide</i>.</p>
<p>Can a risk administrator monitor the ADL strategies that one or more users are running?</p>	<p>Yes, a risk administrator has the ability to view running strategies in X_RISK and X_TRADER. To do so, the risk administrator must be configured to connect to the same TT gateways and Algo SE servers as the user(s), and with appropriate credentials.</p>
<p>Can ADL strategies be password protected?</p>	<p>Yes, to prevent changes from being made to a particular ADL strategy, a user can password protect the strategy before deploying it.</p> <p>For firms that limit the deployment of ADL strategies to administrators only, the administrators can password-protect the strategies, ensuring that their traders cannot view or modify the strategies' source code.</p>
<p>What can an ADL user do to add further checks?</p>	<p>In addition to the administrative and system level risk checks an ADL user can use Alert Blocks and Pause Blocks.</p> <ul style="list-style-type: none"> • The Alert Block can be used to send messages when certain events occur, or when certain conditions are met. For example, the Alert Block can email a risk administrator if the ADL strategy approaches a breach in a specified risk limit. • The Pause Block can be used to pause an algorithm when certain events occur, or when certain conditions are met. <p>ADL also has built-in visual feedback and warnings to help prevent unintentional or unwanted designs.</p> <ul style="list-style-type: none"> • ADL prevents improper connections of blocks. • ADL generates warnings when the designer creates logic that can result in an unintended or a dangerous behavior (e.g. circular reference). Although such behavior is not prohibited, ADL requires the designer to acknowledge the logic.