|  |  |
| --- | --- |
| **Navigation:**  »No topics above this level«  **Entering Calculation Logic** | [Return to chapter overview](https://ninjatrader.com/es/support/helpGuides/nt8/sharpdx_directwrite_textlayout.htm) |

The [OnBarUpdate()](https://ninjatrader.com/es/support/helpGuides/nt8/onbarupdate.htm) method is called for each incoming tick, or on the close of a bar (if enabled) when performing real-time calculations, and is called on each bar of a [Bars](https://ninjatrader.com/es/support/helpGuides/nt8/bars.htm) object when re-calculating the indicator (For example, an indicator would be re-calculated when adding it to an existing chart that has existing price data displayed). This is the main method called for indicator calculation, and we will calculate the CCI value and set the conditions used to draw the CCI plot within this method.

The [OnStateChange()](https://ninjatrader.com/es/support/helpGuides/nt8/onstatechange.htm) method is called once before any bar data is loaded, and is used to configure the indicator (among other things).

**Initializing the Indicator**  
The code below is automatically generated by the wizard and added to the OnStateChange() method, within State.SetDefaults. It configures the indicator for one plot and five lines, and sets the parameters entered in the wizard:

| ns |
| --- |
| AddLine(Brushes.DimGray, 200, "Level 2"); AddLine(Brushes.DimGray, 100, "Level 1"); AddLine(Brushes.DimGray, 0, "Zero Line"); AddLine(Brushes.DimGray, -100, "Level -1"); AddLine(Brushes.DimGray, -200, "Level -2"); |

To change the visual properties of the Zero Line, replace the third line in the code above with the line below. This will change the color to black and the line style to "dash:"

| ns |
| --- |
| AddLine(new Stroke(Brushes.Black, DashStyleHelper.Dash,2), 0, "Zero Line"); |

The code above uses an alternative method overload (an alternative set of arguments passed in to the AddLine() method), in order to pass in a [Stroke](https://ninjatrader.com/es/support/helpGuides/nt8/stroke_class.htm) object rather than a [Brush](http://sharpdx.org/documentation/api/t-sharpdx-direct2d1-brush). With a Stroke, not only can we still specify a Brush, but we have additional options to change the dash style (via DashStyleHelper) and the line width. After this change, your configured lines and plots should look like this:

| ns |
| --- |
| AddLine(Brushes.DimGray, 200, "Level 2"); AddLine(Brushes.DimGray, 100, "Level 1"); AddLine(new Stroke(Brushes.Black, DashStyleHelper.Dash,2), 0, "Zero Line"); AddLine(Brushes.DimGray, -100, "Level -1"); AddLine(Brushes.DimGray, -200, "Level -2"); |

**Adding Core Indicator Logic**

Since this tutorial is meant to cover custom drawing and manually changing properties within an indicator, we will not go too in-depth into the core calculation logic for this custom CCI. Instead, we will copy and paste the core calculation logic from the @CCI indicator already built-in to NinjaTrader.

The @CCI indicator uses an SMA object in its calculations. To add this, copy the line below from @CCI into your custom CCI, directly below the class declaration:

| ns |
| --- |
| private SMA sma; |

Next, copy the following initialization for the SMA object into the OnStateChange() method, within State.Configure:

| ns |
| --- |
| sma = SMA(Typical, Period); |

Next, copy the core calculation logic from @CCI into the OnBarUpdate() method of your custom indicator:

| ns |
| --- |
| if (CurrentBar == 0)   Value[0] = 0; else {   double mean = 0;   double sma0 = sma[0];     for (int idx = Math.Min(CurrentBar, Period - 1); idx >= 0; idx--)       mean += Math.Abs(Typical[idx] - sma0);     Value[0] = (Typical[0] - sma0) / (mean.ApproxCompare(0) == 0 ? 1 : (0.015 \* (mean / Math.Min(Period, CurrentBar + 1)))); } |

The code for your MyCCI class should now look as follows (in addition to the using statements and class declaration) :

| ns |
| --- |
| public class MyCCI : Indicator {     private SMA sma;     protected override void OnStateChange()   {       if (State == State.SetDefaults)       {           Description                 = @"NinjaScript Custom Drawing Indicator Tutorial";           Name                       = "MyCCI";           Calculate                   = Calculate.OnBarClose;           IsOverlay                   = false;           DisplayInDataBox           = true;           DrawOnPricePanel           = true;           DrawHorizontalGridLines     = true;           DrawVerticalGridLines       = true;           PaintPriceMarkers           = true;           ScaleJustification         = NinjaTrader.Gui.Chart.ScaleJustification.Right;           //Disable this property if your indicator requires custom values that cumulate with each new market data event.           //See Help Guide for additional information.           IsSuspendedWhileInactive   = true;           Period                 = 14;           AddPlot(Brushes.Orange, "CCI");           AddLine(Brushes.DimGray, 200, "Level 2");           AddLine(Brushes.DimGray, 100, "Level 1");           AddLine(new Stroke(Brushes.Black, DashStyleHelper.Dash,2), 0, "Zero Line");           AddLine(Brushes.DimGray, -100, "Level -1");           AddLine(Brushes.DimGray, -200, "Level -2");         }       else if (State == State.Configure)       {           sma = SMA(Typical, Period);       }   }     protected override void OnBarUpdate()   {       if (CurrentBar == 0)           Value[0] = 0;       else       {           double mean = 0;           double sma0 = sma[0];             for (int idx = Math.Min(CurrentBar, Period - 1); idx >= 0; idx--)               mean += Math.Abs(Typical[idx] - sma0);             Value[0] = (Typical[0] - sma0) / (mean.ApproxCompare(0) == 0 ? 1 : (0.015 \* (mean / Math.Min(Period, CurrentBar + 1))));       }   } |

**Custom Drawing**  
Add the following code into the OnBarUpdate() method, directly beneath the core calculation logic:

| ns |
| --- |
| // if the plot value is greater than 100, paint the plot green at that bar index if (Value[0] > 100)   PlotBrushes[0][0] = Brushes.Green;   // if the plot value is less than -100, paint the plot red at that bar index if (Value[0] < -100)   PlotBrushes[0][0] = Brushes.Red;   // if the plot value is between 100 and -100, paint the plot orange at that bar index if (Value[0] >= -100 && Value[0] <= 100)   PlotBrushes[0][0] = Brushes.Orange; |

This will conditionally change the color of the CCI plot (referenced by Values[0]) based on its value. By using PlotBrushes[0][0], we are specifying that we wish to change the color of the first plot in the collection at a specific bar index (the current bar index each time the condition is triggered), and we wish for the plot the remain that color at that index, even if the plot value changes in the future. If instead we wished to change the entire plot color, we could use Plots[0].Brush.

PlotBrushes holds a collection of brushes used for the various plots in the indicator. In addition to this, there are several other collections that serve similar purposes, which can be used in the same way. Some examples of these collections are below:

|  |  |
| --- | --- |
| [BackBrushes](https://ninjatrader.com/es/support/helpGuides/nt8/backbrushes.htm) | A collection of Brushes used for chart background color at specific bar indexes |
| [BarBrushes](https://ninjatrader.com/es/support/helpGuides/nt8/barbrushes.htm) | A collection of Brushes used to paint bars at specific indexes |
| [CandleOutlineBrushes](https://ninjatrader.com/es/support/helpGuides/nt8/candleoutlinebrushes.htm) | A collection of Brushes used to paint candle outlines at specific indexes |

Now that everything is in place, your class code should look as below. You are now ready to [compile the indicator](https://ninjatrader.com/es/support/helpGuides/nt8/compiling6.htm) and configure it on a chart.

| ns | |
| --- | --- |
| public class MyCCI : Indicator {     private SMA sma;     protected override void OnStateChange()   {       if (State == State.SetDefaults)       {           Description                 = @"NinjaScript Custom Drawing Indicator Tutorial";           Name                       = "MyCCI";           Calculate                   = Calculate.OnBarClose;           IsOverlay                   = false;           DisplayInDataBox           = true;           DrawOnPricePanel           = true;           DrawHorizontalGridLines     = true;           DrawVerticalGridLines       = true;           PaintPriceMarkers           = true;           ScaleJustification         = NinjaTrader.Gui.Chart.ScaleJustification.Right;           //Disable this property if your indicator requires custom values that cumulate with each new market data event.           //See Help Guide for additional information.           IsSuspendedWhileInactive   = true;           Period                 = 14;           AddPlot(Brushes.Orange, "CCI");           AddLine(Brushes.DimGray, 200, "Level 2");           AddLine(Brushes.DimGray, 100, "Level 1");           AddLine(new Stroke(Brushes.Black, DashStyleHelper.Dash,2), 0, "Zero Line");           AddLine(Brushes.DimGray, -100, "Level -1");           AddLine(Brushes.DimGray, -200, "Level -2");         }       else if (State == State.Configure)       {           sma = SMA(Typical, Period);       }   }     protected override void OnBarUpdate()   {       if (CurrentBar == 0)           Value[0] = 0;       else       {           double mean = 0;           double sma0 = sma[0];             for (int idx = Math.Min(CurrentBar, Period - 1); idx >= 0; idx--)               mean += Math.Abs(Typical[idx] - sma0);             Value[0] = (Typical[0] - sma0) / (mean.ApproxCompare(0) == 0 ? 1 : (0.015 \* (mean / Math.Min(Period, CurrentBar + 1))));       }         if (Value[0] > 100)           PlotBrushes[0][0] = Brushes.Green;         if (Value[0] < -100)           PlotBrushes[0][0] = Brushes.Red;         if (Value[0] >= -100 && Value[0] <= 100)           PlotBrushes[0][0] = Brushes.Orange;   } | |
| **Navigation:**  »No topics above this level«  **8.0.0.12 (Beta) Release Notes** | | [Return to chapter overview](https://ninjatrader.com/es/support/helpGuides/nt8/sharpdx_directwrite_textlayout.htm) |

**Release Date**

July 11, 2016

**Code Breaking Changes**

**Compile Errors**

•The NinjaScript Strategy "**AccountSize**" concept was removed due to limited functionality.  This change would also impact strategies which were coded to use [SetOrderQuantity.ByAccountSize](https://ninjatrader.com/es/support/helpGuides/nt8/setorderquantity.htm).  Please use your own variables to set quantities by account size. **Tip**:  NinjaTrader 8 can read real-world account values for live trading purposes through the Account class, e.g., Account.Get(AccountItem.CashValue, Currency.UsDollar) provides a method for returning a double value representing the current cash value of the account.

**Implementation changes**

•The concept used to force plot series objects through **ForcePlotsMaximumBarsLookBackInfinite** was disabled and tagged as obsolete.  You should set any indicator/strategy plots to [MaximumBarsLookBack.Infinite](https://ninjatrader.com/es/support/helpGuides/nt8/maximumbarslookback.htm) during its construction.

•It is recommended that any strategies generated with the **'Strategy Builder'** tool via Control Center > New > Strategy Builder be removed and recreated after installing B12. If you had invested significant effort in a **Strategy Builder** generated strategy in B11 which you would like to continue to use, please contact us [platformsupport@ninjatrader.com](mailto:platformsupport@ninjatrader.com)

**Notes**

|  |  |  |  |
| --- | --- | --- | --- |
| **Status** | **Issue #** | **Category** | **Comments** |
| Added | 9127 | NinjaScript | Added XML Comments to reflect Supported NinjaScript and NinjaTrader Core Methods (ongoing) |
| Added | 9897 | NinjaScript Editor | Added Multi-Select to the NS Editor References Win File Dialog |
| Added | 9908 | Rithmic | Added additional Rithmic Adapter Account Items |
| Added | 9933 | Window Linking | SFT-162 - Added more link button colors (up to 11) |
| Changed | 10066 | Account Data | Change Position Display option to "Show gross realized PnL when flat." |
| Changed | 10076 | FXCM | Reverted NT8 FXCM Forex volume to NT7 implementation |
| Added | 9839 | Interactive Brokers | Added TWS File picker to allow users to the specific location of TWS/Gateway executable which can vary in some scenarios. [See the NinjaTrader 8 Interactive Brokers connection guide](http://ninjatrader.com/ConnectionGuides/Interactive-Brokers-Connection-Guide). |
| Changed | 9976 | NinjaScript | Disabled the .ForcePlotsMaximumBarsLookBackInfinite concept |
| Fixed | 10022 | NinjaScript Editor | Delimiter matching was hard to see |
| Fixed | 9946 | Orders | Trace Order reported old price after order change |
| Changed | 9875 | Strategy | Removed of "ByAccountSize" Strategy Order Option |
| Fixed | 9887 | Strategy Builder | Strategy Builder additional data window did not show instrument |
| Fixed | 9996 | UI | Removed UI Formatting of Market Data Volume (real-time and historical bar data) |
| Fixed | 9879 | Account Data | Account Data Window default tab order did not match order of Add Tab Menu Sub Items |
| Fixed | 9992 | Account Data | Excess Position Margin Column width was not saved/restored correctly |
| Fixed | 9441 | Adapter | Kinetick adapter was not properly resolving market data settlement time updates |
| Fixed | 9977 | Alerts | Alerts Log Window "priority" was not working as expected with some localization |
| Fixed | 9876 | Attach Order To Indicator, Chart | IsSuspendedWhileInactive did not always re-suspend after manually attached to orders |
| Fixed | 9906 | Bars | Range Bars were built differently using custom data range |
| Fixed | 9889 | Bars | Renko Bars produced undesired ticks bars at EOD |
| Fixed | 9854 | Bars | Break EOD could cause issues with bar pool series when requested after session EOD |
| Fixed | 9803 | Bars, Chart | Bar spacing issues identified when scrolled into future which resulted in the "Automatically choose time-based series for x-axis (non-equidistant bar spacing)" concept to be removed.  We will revisit this feature in the future. |
| Fixed | 9859 | Bars, NinjaScript | BarsSinceNewTradingDay was not operating as expected |
| Fixed | 9985 | Bars, Playback | Exception in multi-series Playback |
| Fixed | 9856 | Chart | Data Box did not update values as you scroll |
| Fixed | 9843 | Chart | Drag and drop series to tab was not creating new series as expected |
| Fixed | 9934 | Chart | Unable to use Instrument Search from new Data Series window |
| Fixed | 9868 | Chart | Fixed Data Box volume formatting issues for FX |
| Fixed | 9858 | Chart | Gap in Chart and Chart Window at 150% DPI |
| Fixed | 10025 | Chart | Multi-Series chart bar width was incorrect |
| Fixed | 10078 | Chart | Crosshair time label rendering incorrect on left side |
| Fixed | 10058 | Chart | Price market incorrect in condition with days to load and session template |
| Fixed | 9988 | Chart Trader | Changing colors of the action, buy, and sell buttons did not save |
| Fixed | 9884 | Chart, Drawing | Draw objects in future would move when chart timeframe changed |
| Fixed | 9943 | Chart, DrawingTool | Mouse cursor was not reverting to normal when canceling the creation of a draw object by right-clicking |
| Fixed | 9964 | Chart, Indicator | Out of range exception was thrown using Horizontal  Line plot on Multi-Series chart |
| Fixed | 9837 | Chart, NinjaScript, Tick Replay | Tick Replay sometimes caused SynchronizationLockException when loading indicator |
| Fixed | 9831 | Chart, Sessions | Rollover date was missing on Default 24/7 with Break at EOD unchecked |
| Fixed | 9931 | Chart, Strategy Analyzer | Strategy Analyzer Data Box opened from trade review chart doesn't show trade execution |
| Fixed | 9929 | Chart, Strategy Analyzer | Aborting in Strategy Analyzer leaves disabled script on chart |
| Fixed | 10048 | Chart, Strategy Analyzer | Unhandled exception when switching to chart in Strategy Analyzer |
| Fixed | 9864 | Chart, Templates | Drawing tool option selection "Stay in Draw Mode" was not included when saving chart template |
| Fixed | 10069 | Code Wizard, Strategy Builder | Additional data option missed week and year type as choice |
| Fixed | 10012 | Commissions | Some commission values displayed with trailing 0's |
| Fixed | 9890 | Control Center | Restoring live executions were sorted reverse |
| Fixed | 9882 | Control Center, Database | Restoring executions were working differently from NT7 |
| Fixed | 9695 | Core | FXCM Adapter reported duplicate trades in a race condition |
| Fixed | 9894 | CQG | Invalid error occurred when trying to connect to CQG after failed CQG logon |
| Fixed | 9910 | Data Grids | Tri-State Sorting was not working in all grids |
| Fixed | 10075 | Data Grids | Account Tab Filter With Positions Was Not Updating as Account position changes |
| Fixed | 9936 | Database | Performance improvements during first ever application startup using default workspaces |
| Fixed | 10042 | Database, Instruments | Removed instrument in instrument manager would sometimes reappear |
| Fixed | 9932 | Database, Trade Performance | TradesPerformance showing incorrect Bars value for some trades |
| Fixed | 9939 | DrawingTool | Ruler was incorrectly rounding pip sizes |
| Fixed | 9945 | DrawingTool | Stay In Draw mode did not apply to Text tool |
| Fixed | 9970 | DrawingTool | Additional settings displayed when selecting drawing tools in the Configured list. |
| Fixed | 9963 | DrawingTool | Changing drawing tool EndTime into future leaves drawing tool drawn as it was |
| Fixed | 9895 | DrawingTool | Drawing tools when switching contract months do not reappear on the chart. |
| Fixed | 9983 | DrawingTool | Performance improvements on default text drawing tool |
| Fixed | 10035 | DrawingTool | Ruler exhibited localization issue |
| Fixed | 9738 | DrawingTool | Setting DrawObject ChartAnchor.BarsAgo did not change rendered object |
| Fixed | 10009 | DrawingTool | Drawing Tools lost auto scale as chart scrolled into future |
| Fixed | 10052 | DrawingTool | TrendChannel Parallel Line Start Anchor did not snap when using bar and price mode |
| Fixed | 9804 | DrawingTool | Trend Lines second line did not respect Snap Mode. |
| Fixed | 9925 | DrawingTool, NinjaScript | DrawObjects collection was not updating with global draw object until NinjaScript reloaded |
| Fixed | 10038 | DrawingTool, Strategy Analyzer | AddChartIndicator indicator was always rendering draw objects on primary panel in Strategy Analyzer |
| Fixed | 10049 | DrawingTool, Templates | PriceLevels reverted after re-compile in Fibonacci Drawing Tools |
| Fixed | 9962 | DrawingTool, Workspaces | Global lines inconsistently saved across workspaces using" workspace save as" |
| Fixed | 10006 | eSignal | Esignal was not processing real-time index data |
| Fixed | 9935 | FX Board | Unable to load ATM Strategy Template Error from FXBoard |
| Fixed | 9950 | FX Board | FXBoard Unrealized PnL field did not update until unrealized PnL changes |
| Fixed | 10067 | FXCM | FXCM order rejection scenario |
| Fixed | 10008 | Hot Key | Removing custom drawing tool code did not remove assigned hot key |
| Fixed | 9912 | Indicator | Bar timer did not function on Playback connection |
| Fixed | 9953 | Indicator | Indicator was plotting on the second bar on chart despite BarsRequiredToPlot = 0 |
| Fixed | 9965 | Indicator | @VolumeProfile.cs results were skewed towards buy volume using Tick Replay |
| Fixed | 10021 | Indicator, SuperDOM | SuperDOM Indicator Data series input changes using multi-time frame indicators |
| Fixed | 9869 | Interactive Brokers | Unable to receive data from the instrument on the SEHK exchange. |
| Fixed | 9961 | Interactive Brokers | Unexpected behavior with chart "Price Based On" was set to Bid/Ask |
| Fixed | 9893 | Interactive Brokers | Was not processing Index data due to no volume reported |
| Fixed | 9995 | Interactive Brokers | Interactive Brokers MarketDataType.DailyHigh/Low was not coming in |
| Fixed | 9994 | Kinetick | Adapter was processing volume of "1" for indexes instead of "0" |
| Fixed | 10034 | Licensing | VendorLicense did not always show all configured free trials |
| Fixed | 9820 | Licensing, NinjaScript | VendorLicense in AddOn prevented OnWindowCreated from working as expected |
| Fixed | 10040 | Market Replay, Time and Sales | Playback connection T&S Window did not scroll precisely to user actions while using Scroll Wheel |
| Fixed | 9898 | NinjaScript | Multi-series indicator was running into deadlocks |
| Fixed | 9857 | NinjaScript | Drawing objects were still visible to NinjaScript after changing instrument on the chart |
| Fixed | 9795 | NinjaScript | Errors on calling 'EventHandlerBarsUpdate' method from Strategy |
| Fixed | 9937 | NinjaScript | Remove NinjaScript assembly window needed vertical scrollbar |
| Fixed | 9955 | NinjaScript | User configured indicator input series changed after exception |
| Fixed | 9978 | NinjaScript | PlotBrushes were not working as expected with AddChartIndicator() |
| Fixed | 9823 | NinjaScript | Indicator plot did not match when using a custom bar type |
| Fixed | 10041 | NinjaScript | Exception calling Draw.Triangle() from AddChartIndicator() |
| Fixed | 10070 | NinjaScript | Blank string used for Name property resulted in crash |
| Fixed | 9928 | NinjaScript Editor | NinjaScript Editor F3 did not work if Find window was closed |
| Fixed | 9971 | NinjaScript Editor | NinjaScript Editor invalid char allowed as name |
| Fixed | 9865 | NinjaScript, Orders | Stop price checks for strategies with OrderFillResolution High had been executed in the wrong bars series |
| Fixed | 9956 | NinjaScript, Strategy | Strategy disabled by SetState was considered as enabled in Strategies tab when attempting to edit |
| Fixed | 10037 | NinjaScript, Strategy Analyzer | Adding indicator to backtest chart with AddChartIndicators caused indicator plots to disappear |
| Fixed | 9874 | NinjaScript, Strategy Builder | Strategy Wizard did not utilize secondary series for input correctly. **Note**:  This fixed resulted in change which preventing "Plot on chart" from working correctly, which is schedule to be fixed in the next beta release (# 10090) |
| Fixed | 9942 | Options | Changing Auto Close Position settings did not create warning if already connected |
| Fixed | 10051 | Orders | Exception on placing order to non-USD sim account created after connecting to provider |
| Fixed | 9915 | Playback | Unhanded exception on Playback disconnect |
| Fixed | 9907 | Playback | Tick Replay on Playback was frozen when using Go To |
| Fixed | 9947 | Playback | Empty warning pop-up when changing Playback start date |
| Fixed | 9944 | Playback | Playback did not "Go To" available date before current start  date. |
| Fixed | 9968 | Playback | Execution markers were not plotting correctly in Playback Connection |
| Fixed | 9975 | Playback | Minor issues with Playback behavior if no data was available |
| Fixed | 9899 | Playback | Playback data auto-replaying on chart when created after Playback connected |
| Fixed | 9989 | Playback | Strategy exception with multiple range series during Playback |
| Fixed | 9990 | Playback | Did not disconnect all the way when disconnected before loaded |
| Fixed | 9999 | Playback | "Error in real time market data handling" when running Playback |
| Fixed | 9986 | Playback | Gaps on dragging slider on Playback data |
| Fixed | 9979 | Strategy | Strategies grid changes to respect region denomination |
| Fixed | 9987 | Strategy | Unexpected strategy accounts issue on Playback data |
| Fixed | 9870 | Strategy Analyzer | Data Box exception using chart display |
| Fixed | 9855 | Strategy Analyzer | Settings display was not updating include commissions param on subsequent backtests |
| Fixed | 9836 | Strategy Analyzer | Parameter tooltip displayed incorrectly |
| Fixed | 9828 | Strategy Analyzer | Control Center logo was sometimes being displayed in chart |
| Fixed | 9980 | Strategy Analyzer | Taskbar previews were not working |
| Fixed | 9922 | Strategy Analyzer | Analysis displayed incorrectly after running separate backtest on optimization result |
| Fixed | 9973 | Strategy Analyzer | Chart Exception: Cannot call DragMove or Activate before a Window is shown |
| Fixed | 9842 | Strategy Analyzer, Templates | Strategy template saved on chart did not restore correctly in Strategy Analyzer |
| Fixed | 9917 | Strategy Builder | Lookback period defaulted to 0 |
| Fixed | 9916 | Strategy Builder | TimeSpan did not use user-applied settings |
| Fixed | 9891 | Strategy Builder | Various Indicator Syntax changes |
| Fixed | 9888 | Strategy Builder | Did not retain added data series in conditions |
| Fixed | 9885 | Strategy Builder | Unlocking code did not open NinjaScript Editor |
| Fixed | 9883 | Strategy Builder | Strategy opened in NinjaScript Editor sometimes produced unhandled exception |
| Fixed | 9867 | Strategy Builder | Did not prevent input of invalid Int value |
| Fixed | 9861 | Strategy Builder | Duplicate input series displayed in selector |
| Fixed | 9938 | Strategy Builder | Conditions window incorrectly scrolled to the top of the list of options when opening configured condition |
| Fixed | 9984 | Strategy Builder | Used incorrect Set methods OnStateChange() |
| Fixed | 9991 | Strategy Builder | Used incorrect value of 0 for selected order quantity |
| Fixed | 9981 | Strategy Builder | Consistency improvements regarding Condition/action copy/save |
| Fixed | 10011 | Strategy Builder | Did not confirm on removing strategy |
| Fixed | 10015 | Strategy Builder | Could not remove Strategy Builder Strategy when opened from NinjaScript Editor |
| Fixed | 10043 | Strategy Builder | Did not automatically compile strategy on clicking Finish |
| Fixed | 10017 | Strategy Builder | Save As' rejected a new name |
| Fixed | 10050 | Strategy Builder | Print() action was not accepting any arguments |
| Fixed | 10055 | Strategy Builder | File names were cut off in the strategy builder load/save strategy popup |
| Fixed | 10039 | Strategy Builder | Did not perform bars check on barsAgo and multi-series scripts |
| Fixed | 10073 | Strategy Builder | Sometimes lost active button highlight |
| Fixed | 10045 | Strategy Builder | String variable did not escape characters |
| Fixed | 9951 | Strategy Builder | Opening screen referred to "wizard" which caused confusion |
| Fixed | 10077 | Strategy Builder | German region decimal format caused compile errors |
| Fixed | 9871 | Strategy, Workspaces | Switching workspaces do not maintain realized PnL and randomly sorts rows in Strategies tab |
| Fixed | 9924 | TD AMERITRADE | Partial Position  was not displaying while connected to TDA |
| Fixed | 10056 | Trade Performance | Changing start date/end date on trade performance prevented generating report for only current day |
| Fixed | 10057 | Trade Performance | Trade Performance column sorting reset when regenerated |
| Fixed | 10027 | Data Grids | Performance Improvement on data grids (Changes require users to restore custom sorting/filtering manually) |
| Changed | 10063 | Indicator | Removed redundant logic of BuySellVolume and BuySellPressure indicators |
| **Navigation:**  »No topics above this level«  **8.0.0.11 (Beta) Release Notes** | | | | [Return to chapter overview](https://ninjatrader.com/es/support/helpGuides/nt8/sharpdx_directwrite_textlayout.htm) |

**Release Date**

May 12, 2016

**Code Breaking Changes**

**Compile Errors**

•[Draw.RegionHighlightY()](https://ninjatrader.com/es/support/helpGuides/nt8/draw_regionhighlighty.htm),[Draw.ArrowLine()](https://ninjatrader.com/es/support/helpGuides/nt8/draw_arrowline.htm) – Added missing "isAutoScale" bool to some signatures

**Implementation changes**

•In some scenarios, the OnRender() method no longer guarantees the bars indexer to be up to date before it is called. Due to the multi-threaded nature of NinjaTrader, attempting to access a series barsAgo value could return seemingly unexpected results (E.g., Close[0], SMA(20)[0], etc).  This change does **NOT** impact data driven events, such as OnBarUpdate(), OnMarketData(), OnOrderUpdate(), etc.  For all OnRender() purposes, you should consider using an absolute index lockup through [Bars.GetClose(barIndex)](https://ninjatrader.com/es/support/helpGuides/nt8/getclose.htm), or [<series>.GetValueAt(barIndex)](https://ninjatrader.com/es/support/helpGuides/nt8/getvalueat.htm) which are generally more reliable in non-data driven events.  Please also see the new [IsValidDataPointAt()](https://ninjatrader.com/es/support/helpGuides/nt8/isvaliddatapointat.htm) which was added to help with absolute index look up.

•Type Casting [DrawObjects](https://ninjatrader.com/es/support/helpGuides/nt8/drawingtools_drawobjects.htm) can fail from a compiled assembly.  In situations where you need to cast a draw object in an assembly, it is recommended you use the dynamic type and compare the object type by its string.  This is not required for non-protected scripts.  Please see the help guide article on [Considerations For Compiled Assemblies](https://ninjatrader.com/es/support/helpGuides/nt8/considerations_for_compiled_assemblies.htm) for more details and examples.

**Notes**

|  |  |  |  |
| --- | --- | --- | --- |
| **Status** | **Issue #** | **Category** | **Comments** |
| Change | 9829 | Adapter | Gain is no longer supported with NinjaTrader 8. |
| Fixed | 9390 | Adapter | Unable to connect to TDA after migrating connection from NT7 |
| Changed | 9679 | Alerts | Alerts Cross Above/below selector now more aware of current market dynamics |
| Fixed | 9657 | Alerts | Default lookback period for CrosssAbove/Below condition in Alerts changed to 1 |
| Fixed | 9559 | Alerts, Workspaces | Alerts Log column widths did not restore from workspace |
| Fixed | 9618 | ATM Strategies | Errors could be produced when modifying ATM order size of active ATM orders. |
| Fixed | 9744 | ATM Strategies, FXCM | ATM SL and PT were always not submitted for CFDs. |
| Fixed | 9658 | Attach Order To Indicator | Detaching Order from Indicator could result in errors |
| Fixed | 9767 | Backup & Restore | Restoring backup by double clicking file with NinjaTrader closed would not restore backup |
| Fixed | 9586 | Backup & Restore | Exceptions could be produced after importing a backup |
| Fixed | 9567 | Barchart | Barchart.com connection did not always report disconnection |
| Fixed | 9794 | Bars | Last bar of session showing high/low of entire session where bars are requested in gap between session definitions |
| Fixed | 9070 | Bars, Chart | Race conditions could cause render loop to freeze indefinitely !!! code breaking change !!! |
| Fixed | 9611 | BarsType, Chart | Default ChartStyle for Renko could change after a restart |
| Fixed | 9681 | Chart | X Axis Grid Lines could be slightly incorrect on non-equidistant charts |
| Fixed | 9524 | Chart | Race conditions after aborting pending bars requests could exhibit issues in real-time data subscriptions |
| Fixed | 9792 | Chart | Chart Label did not denote bid/ask market data types |
| Fixed | 9703 | Chart | Chart could be come unresponsive when using fully compressed time axis on some bars |
| Fixed | 9589 | Chart | Databox loses 'always on top' behavior after right clicking on chart |
| Fixed | 9668 | Chart | Intermittent issues with fixed horizontal grid lines not rendering |
| Fixed | 9643 | Chart | Crosshair time incorrect on multiseries tick-based chart |
| Fixed | 9622 | Chart | On 125%+ DPI global crosshair timestamp marker can show wrong timestamp |
| Fixed | 9570 | Chart | Dragging bar series from additional panel into panel 1 causes shared z-order |
| Fixed | 9571 | Chart | Chart does not update with additional bars when resized and equidistant bar spacing off |
| Fixed | 9659 | Chart | Multi-Series Chart Problems with Non-Equidistant Bar Spacing |
| Fixed | 9561 | Chart | Crosshair Label outline inconsistent with Indicator Price Labels |
| Fixed | 9834 | Chart | Databox uses local denomination for execution commission |
| Fixed | 9678 | Chart | ChartStyles GetBarPaintWidth logic inconsistent |
| Fixed | 9671 | Chart Trader | Chart Trader PnL flag resizes at random when scaling in/out of position |
| Fixed | 9560 | Chart, DrawingTool | Fibonacci text size does not adjust |
| Fixed | 9597 | Chart, Indicator | Multi Series chart not using secondary input when configuring indicator from ui |
| Fixed | 9796 | Chart, NinjaScript | With multi-instrument strategy, plot executions drawing on both series instead of series executed against |
| Fixed | 9772 | Chart, NinjaScript | SetZOrder() method not setting chart object to desired ZOrder level |
| Fixed | 9572 | Chart, NinjaScript | Draw.Region in indicator draws on wrong panel using AddChartIndicator in strategy |
| Fixed | 9551 | Chart, NinjaScript | Empty leftover indicator panel after strategy added indicator removal |
| Fixed | 9732 | Chart, Strategy | "Reload NS" on charts will reload strategies on other charts using same instrument |
| Fixed | 9742 | Chart, Strategy Analyzer | SA execution chart draws executions incorrectly |
| Fixed | 9665 | Commissions | Commission "Per Instrument Type" is applied to incorrect row |
| Fixed | 9711 | Commissions | Minimum Commission not applied when no Per-Unit Commission on Historical Trades |
| Fixed | 9736 | Connections | Connect on startup did not always work correctly |
| Fixed | 9821 | Control Center | Error when exporting Strategies tab to Excel. |
| Fixed | 9574 | Control Center | Account connection status displays as yellow on subsequent connections |
| Fixed | 9573 | Control Center, Playback | Playback account connection status yellow on second connection attempt |
| Fixed | 9569 | Control Center, Strategy | Strategy restores on strategies tab even if not saved with workspace |
| Fixed | 9558 | Control Center, Strategy | Strategy not deleted from DB if it was attached to a chart |
| Fixed | 9745 | Core, Data Grids | Unrealized PnL not updating for all open positions |
| Fixed | 9575 | CQG | Crash if try to connect to two CQG connections |
| Feature | 9677 | Data Grids | Added tri-state grid sorting |
| Fixed | 9751 | Data Grids | Unknown' order state display should be treated as a terminal order |
| Fixed | 9673 | Data Grids | Grid export default filename is inconsistent with other date-driven default filenames |
| Fixed | 9582 | Database | Database Window: Deselect contract does not prevent rollover from occurring |
| Fixed | 9680 | Database | ObjectDisposedException related to SqlCeConnection when shutting down NT |
| Fixed | 9757 | Database | Tools->Database->Update instrument/instrument lists did not always work |
| Fixed | 9797 | Drawing | SnapMode "Disabled" is not respected on multi series charts |
| Fixed | 9581 | Drawing, NinjaScript | Draw objects not drawn initially when using overload that accepts DateTime |
| Fixed | 9798 | Drawing, Workspaces | Global objects do not fully delete from workspace they were not created/last saved in |
| Fixed | 9849 | DrawingTool | DrawTools Text scaling issue on 4k displays |
| Fixed | 9766 | DrawingTool | Some Draw methods missing "autoscale" argument !!! Code breaking !!! |
| Fixed | 9802 | DrawingTool | Drawing object jumps away from cursor when selected |
| Fixed | 9728 | DrawingTool | Global drawing object disappears after disabling/enabling 'Show global drawing objects' |
| Fixed | 9576 | DrawingTool | Draw.TextFixed text centered on position instead of aligned |
| Fixed | 9537 | DrawingTool | Drawing Tool Anchors in the Future on Tick Charts Moving |
| Fixed | 9498 | DrawingTool | Draw objects change size when moved with mouse |
| Fixed | 9827 | DrawingTool | RiskReward Anchor styles apply to all plots. |
| Fixed | 9709 | DrawingTool | Fixed scaling issue with @RegressionChannel |
| Fixed | 9583 | DrawingTool, NinjaScript | RemoveDrawObject does not update DrawObjects when called on historical data |
| Fixed | 9614 | Historical Data Window | Issues Importing Historical Tick data for minute bars |
| Fixed | 9604 | Indicator | Unexpected Autoscaling when using "Horizontal Line" plot |
| Fixed | 9541 | Indicator | Pivots can yield 'Error on calling OnBarUpdate method on bar 0' |
| Fixed | 9840 | Indicator | Exception thrown from multi-series chart with two different days to load configured |
| Fixed | 9851 | Indicator | InvalidOperationException on pulling up indicators dialog while compiling |
| Fixed | 9634 | Indicator, Market Analyzer | Cannot view all indicators in subfolder in indicators column of market analyzer |
| Fixed | 9729 | Indicator, SuperDOM | Indicator preset sets data series on SuperDOM indicator |
| Fixed | 9793 | Instruments | Orders placed on sim account(s) on a setup with multiple connections could cause an assert on shutdown |
| Fixed | 9755 | Interactive Brokers | Interactive Brokers stops plotting on chart using custom trading hours template |
| Fixed | 9667 | Interactive Brokers | IB volume for FX displays incorrect amounts |
| Fixed | 9642 | Interactive Brokers | Interactive Brokers does not connect when the client has multiple accounts/advisor accounts |
| Fixed | 9556 | Interactive Brokers | IB RTH Trading Hours skips Rollover Date |
| Fixed | 9549 | Interactive Brokers | IB secondary data series does not resume realtime data after reconnect |
| Fixed | 9555 | Interactive Brokers | Historical data manager and IB/TWS does not load last day requested and will remove if exists |
| Fixed | 9593 | Interactive Brokers, SuperDOM | SuperDOM Close button does not close IB ZW position |
| Fixed | 9367 | IQFeed | Invalid instrument error could beproduced only on weekends |
| Fixed | 9848 | Log | Improve Logged text indicating connection to HDS/IS |
| Fixed | 9653 | Market Analyzer | Exception when making a Market Analyzer column unvisible/visible. |
| Fixed | 9446 | Market Analyzer | NinjaTrader freeze/crash/errors upon switching instruments in MA with linked charts |
| Fixed | 9598 | Market Replay | Cannot download market replay data |
| Fixed | 9372 | NinjaScript | Casting object from DrawObjects fails in compiled assembly but not in source code |
| Fixed | 9784 | NinjaScript | RemoveDrawObject(TAG) did not remove NS Drawn Global Objects |
| Fixed | 9651 | NinjaScript | Indicator could exhibit memory leak due to overwriting OnConnectionStatusUpdate |
| Fixed | 9577 | NinjaScript | Unable to import assembly which uses SimpleFont as NinjaScriptProperty |
| Fixed | 9580 | NinjaScript | Indicator removed from configured list did not get finalized |
| Fixed | 9548 | NinjaScript | Unable to import NS export containing reference to System.Drawing |
| Fixed | 9789 | NinjaScript | Inconsistent Resource String usage in System NinjaScript Types |
| Fixed | 9631 | NinjaScript | CandleOutline Brushes unset after a second indicator also sets CandleOutline Brushes |
| Fixed | 9596 | NinjaScript | Indicator calling Print() in State.Terminated causes platform to crash |
| Fixed | 9578 | NinjaScript | PPO Secondary series as input series returns 0 |
| Feature | 9730 | NinjaScript | Added IsInstantiatedOnEachOptimizationIteration to State.Configure of Strategy Wizard generated code |
| Fixed | 9008 | NinjaScript | Native Pivots indicator plots different values between 7 and 8. |
| Fixed | 9608 | NinjaScript Editor | Duplicate file name causes unhandled exception |
| Fixed | 9612 | NinjaScript, Playback | Unhandled exception during playback when using AddDataSeries |
| Fixed | 9605 | NinjaScript, Strategy Analyzer | Backtest strategy which uses method in Draw namespace causes exception/failure |
| Fixed | 9811 | NinjaScript, SuperDOM | Volume Profile colors inconsistent on dom and chart |
| Fixed | 9660 | NinjaScript, Workspaces | AddPlot() in State.Configure causes error upon restoring workspace |
| Fixed | 9562 | Orders | Trigger pending OCO orders will not cancel on Server Side OCO connections |
| Fixed | 9725 | Playback | Market replay freezes when paused and will not resume |
| Fixed | 9620 | Playback | Playback Connection causes delay as charts cycle through data |
| Fixed | 9635 | Playback | Multiseries replay race condition |
| Fixed | 9670 | Playback | Playback plot executions do not show until the trade is completed |
| Fixed | 9672 | ShareAdapter | Default file name of images saved via Share dialogue inconsistent with file name preview in Share dialogue |
| Fixed | 9765 | Skins | Interval Selector "Configure" text cut off with Slate light skin and 125 DPI |
| Fixed | 9640 | Strategy | Incorrect error message for invalid strategy sell stop order |
| Fixed | 9833 | Strategy Analyzer | Memory Leak When Aborting an Optimization |
| Change | 9771 | Strategy Analyzer | Spec Change: Move the Strategy Parameters section right below 'General' |
| Fixed | 9684 | Strategy Analyzer | SA Optimization Time Remaining inaccurate when over 24 hours |
| Fixed | 9809 | Strategy Analyzer | SA reporting grid rendering issue |
| Fixed | 9781 | Strategy Analyzer | When restoring workspace analysis graph does not display until graph changed |
| Fixed | 9777 | Strategy Analyzer | Strategy analyzer resize lag after backtest |
| Fixed | 9778 | Strategy Analyzer | SA Display selector showing PC currency instead of account currency |
| Fixed | 9759 | Strategy Analyzer | SA Genetic lists multiple duplicate results |
| Fixed | 9743 | Strategy Analyzer | Strategy Analyzer unhandled exception upon sorting column multiple times |
| Fixed | 9722 | Strategy Analyzer | Strategy Analyzer Tooltip localization issue |
| Fixed | 9700 | Strategy Analyzer | Strategy Analyzer default values for data series period always 1 |
| Fixed | 9715 | Strategy Analyzer | Strategy Analyzer chart/executions/orders blank on optimization rerun |
| Fixed | 9638 | Strategy Analyzer | Separate denominations displayed in Strategy Performance. |
| Fixed | 9655 | Strategy Analyzer | SA Logs restore order incorrect for instrument list backtests |
| Fixed | 9543 | Strategy Analyzer | Optimizer silently fails when min is greater than max |
| Fixed | 9544 | Strategy Analyzer | NullReferenceExeption in Chart when switching Strategy Analyzer Tabs |
| Fixed | 9366 | Strategy Analyzer | Failed Optimization when optimizing on data series |
| Feature | 7634 | Strategy Analyzer | Report time frame used for order fill resolution in strategy settings |
| Fixed | 9825 | Strategy Analyzer | Enums in Default strategy template not re-applied in SA after compiling in NS Editor |
| Feature | 5171 | Strategy Builder | Strategy Builder |
| Fixed | 9826 | Strategy Builder | Strategy Builder buttons hover highlight missing top and bottom |
| Fixed | 9832 | Strategy Builder | Strategy builder wizard region |
| Fixed | 9852 | Strategy Builder | Builder condition edit incorrect comparison combobox |
| Fixed | 9566 | SuperDOM | Error rendering real time market data in SuperDOM |
| Fixed | 9718 | SuperDOM | SuperDOM Order Flags triangle rendering |
| Fixed | 9710 | SuperDOM | Dynamic SuperDOM Can inadvertently suspend if Order Flag moves into mouse cursor |
| Fixed | 9822 | SuperDOM | SuperDOM Buy/Sell Text Stays Truncated After Resizing Window |
| Fixed | 9691 | SuperDOM | Indicator not synchronized between Superdom and Chart |
| Fixed | 9790 | TD AMERITRADE | TDA 2 Cancel Events |
| Fixed | 9779 | TD AMERITRADE | TDA - Stuck orders when modifying price |
| Fixed | 9737 | TD AMERITRADE | Orders placed from TDA Website do not show up in NT8 |
| Fixed | 9733 | TD AMERITRADE | TDA Partial Fills Handled Incorrectly With Orders And Executions Displayed Improperly |
| Fixed | 9786 | TD AMERITRADE | Modifying TDA order temporarily shows as double the qty amount |
| Fixed | 9764 | TD AMERITRADE | Daily data not displaying for Mondays with TD Ameritrade |
| Fixed | 9683 | TD AMERITRADE | TD Ameritrade error for all instruments |
| Fixed | 9701 | TD AMERITRADE, Time and Sales | Large first print in T&S when connecting to TD Ameritrade |
| Fixed | 9758 | UI | Tab on instrument window |
| Fixed | 9652 | UI | Pre-populate data in Instrument Lists, Risk, Commissions, and Alerts to be consistent |
| Fixed | 9731 | UI | Inconsistent cursor type in Email Support window |
| Fixed | 9702 | UI | Account Properties selected template "view" text not aligned to the right |
| Fixed | 7733 | Workspaces | Viewable range message box counts when control center restored below other windows |
| Fixed | 9666 | Workspaces | Unhandled exception in New Workspace dialogue |
| Fixed | 9554 | Workspaces | Global Draw Object template not saved when select Save workspace |