# **TIBCO Statistica**<sup>™</sup> Data Entry Admin Guide

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Two-Second Advantage®

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# **TIBCO Documentation and Support Services**

Documentation for this and other TIBCO products is available on the TIBCO Documentation site. This site is updated more frequently than any documentation that might be included with the product. To ensure that you are accessing the latest available help topics, visit: <a href="https://docs.tibco.com">https://docs.tibco.com</a>

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- For an overview of TIBCO Support, and information about getting started with TIBCO Support, visit this site: http://www.tibco.com/services/support
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# **Overview**

Use Statistica Data Entry to configure data entry scenarios and to administer data entry via web browsers. It can also be used to analyze data using all the graphical data analysis, statistical analysis, and data mining capabilities of the Statistica Enterprise software platform.

Like all objects in Statistica Enterprise, the Web Data Entry objects are created and administered via the Statistica Enterprise Manager application. The image below shows the relationships between the objects.



## Statistica Data Entry objects:

- Characteristics: Numeric fields for a web form
- EXAMPLE: pH
- Labels: Text or date data for a web form
- EXAMPLE: Lot Number
- **Data Entry Setups:** Groups of Characteristics and Labels configured with specific User/Group permissions to collect the appropriate data via a web form
- Data Entry Setup Sequences: Grouping and ordering of Data Entry Setups

Data entry administrators create the web forms (Data Entry Setups) with the Statistica Enterprise Manager application and save them in the System View folder. These Data Entry Setups grant users access to enter data and approve entered data.

Optionally, multiple Data Entry Setups can be grouped together and ordered within the Data Entry Setup Sequence. Once set up, the sequence guides you from one form to the next during data entry. To use the data entry forms, open a browser in Internet Explorer (IE), Chrome or Firefox and visit a URL such as <u>http://[servername]/dataentry</u>. Turn on the compatibility mode if using IE10 or IE11.

## Installation

The three parts of Statistica Enterprise with Data Entry:

- 1. Statistica Enterprise, applications
- 2. License Manager service
- 3. Data Entry, web service

The applications and services are usually installed on the same server.

Prerequisites to installing the Statistica software:

- 1. IE, Chrome, or Firefox installed on client computers
- 2. IIS with ASP.NET configured for ISAPI and CGI
- 3. Net 3.5 SP1, and .Net 4.6.1
- 4. Administrator login account/password for the database server.
- (i) NOTE:
  - Choose to create a new database during installation or to use an existing Enterprise database.
  - Typically Statistica Enterprise Server and Statistica Data Entry use the same database.
  - Access database is not supported for Statistica Data Entry.
  - The server will run a flexLM license service after the software installation is completed.

## Definitions

Term	Definition	
Analysis ConfigurationSettings within Statistica Enterprise Manager that control the analysis of data, including IQC, SVB, Ad hoc, and R configurations.		
	Typical work flow:	
	1 An analyst creates the configuration.	
	2 A group of people execute the configuration when the information is needed.	

Term	Definition		
	<ul> <li>NOTE:</li> <li>These configurations can also be executed to generate reports.</li> <li>The Database Connection and Data Configuration must be created before the Analysis Configuration can be created.</li> <li>Analysis Admin (AADM) permission must be granted to users who will create Analysis Configurations.</li> </ul>		
Data Sample	Data that has been entered into a web form is known as a sample or record, or can be referred to as data sample or data record.		
Data Verification and Approval	<ul> <li>Three methods for reviewing, approving, and electronically signing data that has been entered:</li> <li>1 Approval of sample: <ul> <li>a One person enters data.</li> <li>b Second person manually reviews entered data and approves or rejects data.</li> </ul> </li> <li>2 Blind data entry, manual approval: <ul> <li>a Two people enter the same data.</li> <li>b The system compares the two samples.</li> <li>c Third person logs into system and reads report about the differences between the two samples.</li> <li>d Third person approves or rejects the data.</li> </ul> </li> <li>3 Blind data entry, automatic approval: <ul> <li>a Two people enter the same data.</li> <li>b The system compares the two samples.</li> <li>c Third person approves or rejects the data.</li> </ul> </li> </ul>		
Double Blind Data Entry	<ul> <li>(Also known as blind data entry)</li> <li>1 Two people enter the same data.</li> <li>2 The accuracy of the data entry is verified by the comparing the two different records.</li> </ul>		
Characteristic	Numeric data to be collected for analysis, such as pH(i)NOTE: To verify the numeric data and improve the accuracy of data entry, set up reasonable low and high numbers on a Data Entry Setup (web form).		
Concurrent License Manager	Statistica Enterprise application used by administrators to identify who is using the analytical or data entry components, and the number of licenses currently in use		
Configuration or Object	Objects managed with Statistica Enterprise Manager, such as Data Configuration		
Database Connections	<ul> <li>Settings (OLEDB or ODBC provider, login name, password) that control the connection to the database.</li> <li>(i) NOTE: Users who create these connections must have Database Admir companies limit this ability to information technology employees.</li> </ul>		
Data Configuration	<ul> <li>Settings (SQL and filtering criteria) that control querying data.</li> <li>Grant Data Admin (DADM) permission to users who will create data configurations.</li> <li>Create the Database Connection prior to creating the Data Configuration.</li> </ul>		

Term Definition			
	<ul> <li>Create this Data Configuration prior to creating an Analysis Configuration.</li> <li>Grant users who need access to raw data access to run this configuration.</li> </ul>		
Data Entry Setup	Groups of Characteristics and Labels configured with specific User/Group permissions to collect the appropriate data for particular scenarios. It creates and controls the web forms that data entry staff will use.		
Data Entry Setup Sequence	<ul> <li>A configuration used by administrators to sequence the order of web forms</li> <li>EXAMPLE: Data must be entered on the Monday form before data is entered on the Tuesday form.</li> <li>() NOTE It can also be referred to as a Sequence.</li> </ul>		
Data Entry (DE)	Data entry user permission <b>EXAMPLE:</b> A user with this permission can open http://[servername]/dataentry with Internet Explorer and start entering data.		
Data Entry Approver (DEAPPRV)	<ul> <li>Data entry approver user permission that allows opening</li> <li>http://[servername]/dataentry with Internet Explorer and</li> <li>approving data or requesting data revisions</li> </ul>		
Data Entry Admin (EDE)	Data entry administrator user permission that allows creating characteristics, labels, and data entry setups.		
Historical Edit (HEDIT)	<b>Jit</b> Historical edit user permission that allows editing data after it has been marked Complete.		
IQC (Interactive quality control)	A type of Analysis Configuration. active y bl)		
Label	Text or date data elements on a Data Entry Setup (web form) that allow traceability		
	EXAMPLE: Lot Number		
Metadata	Data that describes other data, managed by the Statistica Enterprise Manager		
	<ul> <li>Wo types of metadata.</li> <li>Metadata used to describe or classify data. This type of metadata could be captured with a Label on a web form, or could be a Data Entry Setup's name or a System View Folder's name.</li> <li>EXAMPLE: A process can be upstream or downstream</li> <li>Metadata used to describe information saved within the configurations</li> <li>EXAMPLE: A Database Connection contains metadata on how to connect to database type (Oracle, SQL Server, Access, and flat file), login account, and password.</li> </ul>		
Override (OVR)	Override user permission, typically provided to expert users only, lets you override the reasonable values that are defined on a Characteristic.		
Piece	A type of characteristic or label that can have multiple entries per sample (batch)		
QC	Quality Control		
Statistica	Part of the Statistica Enterprise suite of products produced by Statistica. This application can be installed on a server or client computer. It contains the statistical analysis and data visualization functionality.		

Term	Definition
Statistica Enterprise Manager	Part of the Statistica Enterprise suite of products produced by StatSoft. This application provides the means for controlled creating, editing, and sharing of labels, characteristics, data entry setups, database connections, data configurations, analysis configuration, and reports. This application manages metadata about analyses.
Statistica Query	A Statistica product produced by Statistica. It can be installed on a server or client computer. This utility application is used to easily access data from a wide variety of databases (including many large system databases such as Oracle, MS SQL Server, Sybase, etc.) using Microsoft's OLE DB or ODBC conventions.
Statistica Data Entry	The web-based system that is part of the Statistica Enterprise suite of products produced by Statisstica. Administrators can build web forms with Statistica Enterprise Manager and publish them to specific users for data entry.
SVB	Statistica Visual Basic (programming language). SVB is a super- set of the industry-standard Visual Basic language.
System View	Folder structure defined in the Statistica Enterprise Manager application to organize the storage of configurable objects. A <b>Data</b> <b>Entry Setup</b> object would be saved in a folder in the <b>System</b> <b>View</b> .
URL	Uniform Resource Locator. The address of a web page on the World Wide Web.

# **Unique Values for a Label**

A label that contain a unique value must be a sample label.

## **EXAMPLES OF UNIQUE VALUES:**

- Batch ID
- Lot ID
- Locator record
- Transaction number

Configuring a label object to contain a unique value prevents duplicate data entry.

#### **EXAMPLE:**

- 1. You manufacture a drug in three batches; A, B, C.
- 2. Data has been entered for all three batches.
- 3. Someone tries to enter data for batch A again.
- 4. The system displays an error.

A unique value is also needed for double-blind data entry. Blind data entry requires two people to enter the same data record. The system needs to know that two specific records should be compared.

Three methods for identifying a label as unique:

Method One	Method Two	Method Three
Select Require approval of samples as the approval type on the Data Entry Setup.	Select <b>Blind data entry</b> as the approval type on the <b>Data</b> <b>Entry Setup</b> . While creating the object, the user will be prompted to declare a <b>Blind</b> <b>ID</b> .	Configure a label for Statistica Product Traceability and add it to a Data Entry Setup. Ensure that Product traceability options is selected on the Label and the Data Entry
For configuration details, read about Unique Labels in the System Options, IIS section.		Setup.
<b>Data Entry</b> <b>Setup</b> will now require a unique value.	Data Entry Setup will now require a unique value.	All data entered into the system will now require unique values.

## **Users and Groups**

Use the Statistica Enterprise Manager application to maintaining users and groups.

Two types of users:

- Native Statistica Enterprise users
- Imported Windows domain users

Native Statistica Enterprise users exist only within Statistica Enterprise and Web Data Entry.

To create a new user, click the New User button.

Integrated login is possible when you import existing Windows domain users.



## Permissions

We recommend structuring groups for two levels:

• **System level groups** define what applications or areas of the system their users can access.

Typical names for **System level groups**:

- o Data Entry Admin
- Data Entry Approver
- o Data Entry User
- **Object level groups** grant users edit and read permission to configurations. These groups typically do not contain any system permissions. **EXAMPLE: Team North** can more easily share configurations with the entire team.

A list of system permissions that can be applied to users or groups:

- NOTE: System Admin (SADM) has all of the permissions listed below.
- Analysis Admin (AADM) can create Analysis Configurations through the Enterprise Manager system view. Data entry administrators might need this permission to create a New Analysis Configuration off this Data Entry Setup.

🗄 🥵 Data	ntry Setup
	Go to Next Step
	Launch Data Entry
	New Analysis Configuration off this Data Entry Setup
	New Analysis Configuration off Specific Version of this Data Entry Setup
	New Data Configuration off this Data Entry Setup
	New Data Configuration off Specific Version of this Data Entry Setup

- Data Admin (DADM) can create Data Configurations. Data entry administrators might need this permission to create a New Data Configuration off this Data Entry Setup.
- Data Entry (DE) can enter data.
- Data Entry Admin (EDE) can create Characteristics, Labels, and Data Entry Setups, which are the permissions required to set up the data entry form.
- Data Entry Approver (DEAPPRV) can approve or request revisions to the entered data.
- Historical Edit (HEDIT) can edit complete data.
- **Override (OVR)** can enter data that is outside of the low and high range for numeric values.
- **User (USR)** can run Statistica Enterprise Manager. This base permission is needed for anyone who creates any configuration.
- **The SYSTEM user** in Statistica Enterprise Manager supports the blind data entry process. The system records that the SYSTEM user last modified a web form to either approve or require revision. This user cannot be deleted or modified.

### **Work Flow**

The different levels of data entry user permissions ensure that users follow a specific workflow, which protects against missing or incorrect data. The workflow requires that data be complete and approved.

#### EXAMPLE 1:

Example work flow from data entry to data analysis with the **Require approval of samples** option. The work flow assumes that characteristics and labels were already created.

1. An administrator creates a **Data Entry Setup** in Statistica Enterprise Manager and selects the **Require approval of samples approval** option.



**NOTE:** This workflow does not require using a unique value in a sample label field; however, optionally it could be used with UniqueLabels. See the System Options, IIS section.

- 2. A user with **Data Entry (DE)** permissions enters the data. The data can be saved and the form can be completed at another time.
- 3. Later, the user with Data Entry (DE) permissions logs into the website again to enter more data and select the Complete option. The data must be complete before it can be approved. Once a sample is complete, it cannot be edited by a user with Data Entry (DE) permissions unless it is marked as Requires Revisions. Only a user with Historical Edit (HEDIT) permission can edit a complete data record.
- 4. A user with **Data Entry Approver (DEAPPRV)** permissions reviews the data, and marks it as either **Approved** or **Requires Revisions**. This user must be different from the user who entered the data, except when otherwise allowed in Statistica Enterprise Manager, **System Options, Data Entry**.
- 5. Data that requires revisions must be modified and marked as complete again before it is eligible for approval.
- 6. Email notification can be sent to designated users whenever a sample is marked as **Complete**, **Approved**, and/or **Requiring Revision**.
- 7. Data entry activities can be recorded in an audit log.
- 8. An administrator sets up the data source for analysis by creating a **Data Configu**ration from the **Data Entry Setup**. The administrator can also create an **Ad hoc Analysis Configuration** with filtering turned on.
  - (i) **NOTE:** Data Configurations and Analysis Configurations are created for Data Entry Setups for analysis. They can be configured to only include completed data and/or approved data.
- 9. Analyst permissions:
  - a. Can create a **Workspace** that uses the **Data Configuration** as a data source
  - b. Can add nodes to merge in additional metadata or limits/specifications for a quality control chart
  - c. Can add a node to generate the quality control chart
- 10. An analyst saves the **Workspace** into Enterprise Manager as an **Analysis Configuration**.

11. A business user runs the **Analysis Configuration** to look at charts based on the current data. This user may also run the **Ad hoc Analysis Configuration** to perform other analyses on the data.

#### **EXAMPLE 2:**

Example workflow for Blind Data Entry, which is used only for data entry. The work flow assumes that Characteristics and Labels were already created.

- 1. The administrator creates a Data Entry Setup in Statistica Enterprise Manager and selects the Blind Data Entry approval option. The company decided to use the Manual approval option because it wants to collect an electronic signature for approval from a human. The system electronically signs the approval by selecting Automatic approval.
- 2. The administrator reviews the Inputs properties page on the Data Entry Setup and performs the following tasks:
  - a. Selects Blind ID (the sample label that will contain a unique value: LOT123.).
  - b. Decides what other fields (Characteristics and Labels) should be compared by the system. Two people will enter data, but they don't have to enter exactly the same data.
     EXAMPLE: A comment field might need to be different for the two data entry employees.
  - c. Decides if a specific field will be allowed to not match and the data record still be approved. This may be needed in a complex manufacturing environment.
  - d. Reviews the email notification options on the Data Entry Setup and adds the email address for the data approver. This user will receive an email when the data is complete, requires revision, or needs approved.
  - e. Grants permission to use the Data Entry Setup to data entry staff and data approvers
- 3. A user with Data Entry (DE) permissions enters the primary data sample.
- 4. A second user with Data Entry (DE) permissions enters the matching data sample.
- 5. The system then detects if the data matches or not and performs these processes:
  - a. If matching values are detected in the Blind ID label, starts comparing the other fields. Sends an email to the Data approver (DEAPPRV permission) that the data is complete.

- b. If matching values are not detected in the Blind ID label, sends an email to the data approver (DEAPPRV permission) that the data requires revision. Sends an email to both data entry users if the data records do not match. The system does not provide any details on what didn't match. Both users should review all the fields that they entered to confirm they were correctly entered.
- c. After this review, the users who received the required revision notification will complete the data again.
  - (i) **NOTE:** If the two users are have difficulty matching their data records, they can log into http://[server name]/dataentry and review a report on the differences. A third user with permission on the **Data Entry Setup** can communicate which field is different.
- 6. When both data records are complete, the approver logs into http://[server name]/dataentry, reviews the difference report on the data, clicks the approve button, and electronically signs approval.

# **System Options**

## Audit Log

All data entry activities can be recorded in the **Audit log**, which is controlled in Statistica Enterprise Manager.

- 1. Under System Options, select Audit Log.
- 2. In the properties page, select **Data Entry Operation** to log data entry activities.
- 3. If you need to track the create/edit/delete activities for Data Entry Setups, select **Data Configuration/Data Entry Setup**.
- 4. Select Data Entry Setup Sequence to log activities related to this object.



## **Data Entry**

Under System Options, select Data Entry. These settings apply to all Data Entry Setups.

120 Ø 9 X 4 13 ₹ .	Statistica Enterprise Manager			
File Home View			R	۷
Commit Go Back	👗 Cut 🛛 👘 Paste Link Select All	✓ System View	🔄 Options 🛺 🌆 🖄	
→Next Step	🖹 Paste 🗙 Delete	✓ Status Bar	Statistica Database Toad Data Toad Intelligence Migration Point Central	
Changes Navigate	Edit	View	Tools	
System View STATISTICA Enterpr Detabase Connections Solution Co	ise I Servers rs yystems	✓ When creating a new Analy the criteria for all Labels in the URL for Sample Editing http://dailybuild/dataentry	iis Configuration based on a Data Entry Setup, automatically add " e Data Entry Setup.	All" to
Stations     Stations     Set Administration     Define Users     Define Groups		<ul> <li>Retrieve all data for charact</li> <li>Prompt for electronic signatulation</li> </ul>	aristics, independent of Data Entry setup re on sample completion	
System Options	✓ Prompt for electronic signature on sample approval			
- Analysis		Allow users to approve their own samples		
		🔽 For Blind Data Entry	user making last change can also approve	
Account Policies     Default database connection for creatin     Data Entry Seture:		creating Data Configurations off		
🔄 🗐 Statistica Server		CTATICTICA Entermine Distab		
Mail Notification		Query time out:	second(s)	
Log viewer	- Control - Cont			
Server Tack Setz				
Diversity Server (ass Sector)				
Alarm Dashboards				
Ready			CAF	NUM SCRL

- Select the first check box to automatically add **All** to the criteria for all Labels in the **Data Entry Setup** when creating a new **Analysis Configuration** based on a **Data Entry Setup**.
- The system uses the URL you enter in the **URL for Sample Editing** box for outbound email notifications on data entry tasks. You can typically set it

http://[servername]/dataentry. The example email in the next image uses this URL.



- Retrieve all data for characteristics, independent of Data Entry setup is not a common use case. Since, you will usually create one Characteristic and use it across many Data Entry Setups, and you will analysis the Characteristic data based on the Data Entry Setup form, this option is not selected by default. Only select this check box if you are interested in analyzing Characteristics across all the Data Entry Setups.
- Regulated customers typically select **Prompt for electronic signature on sample completion** and **Prompt for electronic signature on sample approval**. These options prompt for an electronic signature when the following occurs:
  - Data entry person clicks the **Complete** button
  - Approver clicks the **Approve** button

The **Allow users to approve their own samples** option is typically turned off in validated environments if the **Require approval of samples** option on **Data Entry Setups** is being used. Regulated industries typically do not allow the same person to both enter data and approve the data. However, this option can be useful for testing new Data Entry Setups in development or non-validated environments. The Allow users to approve their own samples option and Blind Data Entry, user making last change can also approve options may be turned on when using Blind Data Manual Approval on Data Entry Setups. In this case, two people will enter the data. The second person will also approve the data. If these two options are turned off, you will need three people to do data entry and approval.

**NOTE:** After installation this database connection must be created and then used on this property page.

## **IIS, Application Settings**

Other options are configured via **IIS**.

- 1. On Windows Server 2008 R2, Select the Start menu > Administrative Tools, Internet Information Services (IIS) Manager.
- 2. On Windows Server 2012, start the Server Manager application >Tools menu > Internet Information Services (IIS) Manager.
- 3. In the Connections section, open your [server name] and then Sites. Select and open Default Web Site. Select **Data Entry**.



4. Double-click the **Application Settings** icon to display the list of application settings as shown in this image and listed below.



# Application Settings

Use this feature to store name and value pairs that managed code applications can use at runtime.

Group by:	No Grouping 🔹		
Name 🔺		Value	Entry Type
aspnet:Max	HttpCollectionKeys	9999	Local
BlindDataEn	tryHideMatchingValue	false	Local
BlindDataEn	tryMakePrimaryOnSave	false	Local
BlindDataEn	tryPrepopulateMatchin	false	Local
BlindDataEn	tryShowUnmatchedVal	false	Local
ByColumnsF	irstColumnWidth	110px	Local
ByColumnsV	Vidth	150px	Local
ByRowsFirst	:ColumnWidth	200px	Local
ByRowsWid	th	150px	Local
CommentNo	tRequiredOnApprove	false	Local
CompareSar	mplesCaseSensitive	false	Local
DateFormat		ddMMMyy HH:mm	Local
DateFormat	Locale		Local
DefaultDom	ainName	tulsa	Local
DisableDate	Picker	false	Local
DisplayChar	acteristicDescription	false	Local
DisplayLabe	Description	false	Local
EditMaskCha	er 🛛	-	Local
EditMaskInt	eger	9999999999	Local
EmailFromAc	ddress	WebDataEntry@statsoft	Local
FixedHeade	rs	true	Local
GlobalRecen	itSamplesMaxNumber	100	Local
GlobalRecen	tSamplesNumberOfDays		Local
LingerTimeo	ut	75	Local
LogAllSample	eChanges	false	Local
LoginMessag	je	<u>This is example t</u>	Local
LogUserActi	vity	false	Local
MainMenuMe	essage		Local
MasterPage	Logo	images/Statistica.gif	Local
PromptForS	ampleSave	false	Local
QueryLabel	MaxEntries	1000	Local
RecentSamp	olesLabels		Local
RecentSamp	blesMaxNumber	100	Local
RecentSamp	blesNumberOfDays		Local
RecentSamp	blesPageSize	25	Local
SampleUpda	iteTimeout	45	Local
SendEmailO	nSampleApproval	true	Local
SendEmailOnSampleCompletion		true	Local
SortSystemView		true	Local
UniqueLabel	s		Local
UseEditMasł	ForDate	true	Local
UseEditMas	<toenforceprecision< td=""><td>false</td><td>Local</td></toenforceprecision<>	false	Local
WebSTATHo	ost	DAILYBUILD	Local

1

- **Aspnet:MaxHttpCollectionKeys**. Define the maximum number of form elements that can exist on an ASP.NET page.
  - (i) **NOTE:** Some versions of ASP.NET default to 1000 form elements, which can cause problems saving large data entry forms.
- BlindDataEntryHideMatchingValue. Set to true to avoid displaying the Matching Value column on the Recent Samples list. This list is displayed after login into http://[server name]/dataentry. The Matching Value column displays the unique value (sample label) such as LOT123.

Blind data entry requires that two people enter the same data. Set this option to false to enable the second person can locate data entered by the first person on the **Recent** Samples list. If this option is set to true, the second data entry user has to type LOT123 into the label field.

Process if option set to true:

- The second person sees a blue icon next to LOT123.
- The user clicks on the icon to automatically create a new form and populates the label with LOT123.
- **BlindDataEntryMakePrimaryOnSave.** Do not change without discussing with support@statsoft.com. It should be false for most customers.
- **BlindDataEntyrPropoulateMatchingSample**. Specific to when **Blind Data Entry** is enabled for a **Data Entry Setup**. Possible values are **true** and **false**. If the value is set to **true**, when a matching sample is created, the values from the primary sample will be automatically prefilled for inputs that are not part of the **Blind Data Entry** comparison.
- BlindDataEntryShowUnmatchedValues. Specific to when Blind Data Entry is enabled for a Data Entry Setup. Possible values are true and false. If the value is set to true, when differences occur during while the primary or matching sample are saved, the different values from the other sample will be displayed to the user. When set to false, only the input name and piece numbers of the differences are identified to the user, and the actual different value from the other sample is not visible to the user.
- **ByColumnsFirstColumnWidth.** Use to set the width of the first column displayed when a data entry form is configured to display the inputs by columns.
- ByColumnsWidth. Use to set the column width for fields on the Data Entry pages.
- **ByRowsFirstColumnWidth.** Use to set the width of the first column displayed when a data entry form is configured to display the inputs **by rows**.
- ByRowsWidth. Use to set the width of the rows for the Data Entry pages.

- **CommentNotRequiredOnApprove.** When **Sample approval** is enabled and the sample is being reviewed by the approver, if this option is set to **true**, the approver is only required to enter a comment when the sample is marked as **Requires Revision**. If the sample is marked as **Approved**, a comment is not required.
- **CompareSampleCaseSensitive.** If this option is set to **true**, when comparing sample label data the system will compare, using case sensitive compare (so **a** is different than **A**). If false, then case insensitive compare is applied (**a** and **A** are considered the same).
- **DateFormat.** This option controls the format of the date/times that are retrieved from the database.

**EXAMPLE:** Dates could be entered as 10/1/2010 but displayed as ddMMMyy.

- **DateFormatLocale.** If this option is defined, it will force clients to use a specific locale just for Date/Time controls. The expected syntax of the option is a **CultureInfo** name such as **en-US** or **es-ES**. Note that this value is blank by default and not a commonly used setting.
- **DefaultDomainName.** This option sets the domain name most frequently used for integrated login.
- **DisableDatePicker.** If set to **false**, the date labels on the data entry from can be entered using a date picker control. If set to **true**, the dates must be entered as strings.
- **DisableCharacteristicDescription.** Specifies whether the **Characteristic description** defined in Enterprise Manager is displayed as part of the **Data Entry Form** visible in the header for that field. If this option is set to **false**, the description is still available as a header tooltip.
- **DisableLabelDescription.** Specifies whether the **Label description** defined in Enterprise Manager is displayed as part of the **Data Entry Form** visible in the header for that field. If this option is set to **false**, the description is still available as a header tooltip.
- EditMaskChar. This option sets the value displayed by Masked edit when nothing has been entered for a character.
- EmailFromAddress. Set the From email address used when sending validation status.
- **FixedHeaders**. The default value is **true**. If set to **false**, the left column headers will not be displayed in a fixed position where they are always visible.
- GlobalRecentSamplesMaxNumber. This setting limits samples.

- **GlobalRecentSamplesNumberOfDays.** This setting applies to the global listing of samples across all **Data Entry Setups**. Leaving it blank causes the number of samples to t be unlimited and could cause performance issues.
- **GlobalRecentSamplesNumberOfDays.** After signing into Statistica Data Entry, the first page will display the recent samples. This variable controls the number of days of data that is retrieved, regardless of the **Data Entry Setup**. Leaving it blank causes the samples to be unfiltered, and could cause a performance issue.
- LingerTimeout. When Serialized session state is used, which would be required in a multiple Web Data Entry Server (NLB) environment, this setting defines the time in seconds to linger the WBDE feature checkout. The default value is 75, which means if you did not explicitly log out of the Web Data Entry Server and instead closed your browser window, it would take up to 75 seconds for the WBDE feature being consumed to be released. The smaller the value, the more often the client will need to communicate with the Web Data Entry Server to keep the license from being released. The setting cannot be less than 30 or greater than 900.
- LogAllSampleChanges. The default value is false. If set to true, every time a sample is saved, any changes from the previous version of the sample will be added to the audit log. When set to false, the changed values are only added to the Audit log when a Completed sample is resaved.
- LoginMessage. This HTML message is displayed prior to logging onto Data Entry. Copy your HTML code into the variable. Ensure that the HTML is all on one line. New lines are not acceptable.
- **LogUserActivity.** The default value is **false**. If set to **true**, event log entries will be entered into the Statistica application event log for the following events:
  - User login
  - Sample approval
  - Sample saving

User logout – (This event only fires if serialized session state is not enabled)

- **MainMenuMessage.** This HTML message is only displayed on the recent samples page. It is located on the left side. A green square surrounds around this area. Copy your HTML code into the variable. Make sure the HTML is all on one line. New lines are not acceptable.
- **MasterPageLogo.** This option displays the file name of the image that is displayed in the upper-right corner.

- **PromptForSampleSave.** The default value is **false**. If set to **true**, when the **Save** button is clicked, you will be prompted for an electronic signature. By default, you are only prompted for an electronic signature when you click the **Save and Complete** button.
- **QueryLabelMaxEntries**. The default value is **1000**. This setting limits the maximum entries populated in the **Query label** combo box.
- RecentSamplesLabels. After signing into Statistica Data Entry, the first page will display the recent samples. You can modify what labels are displayed for the recent samples. The label names are pipe delimited.
   EXAMPLE: Batch Number | ID | Product Name
- **RecentSamplesMaxNumber.** If left blank, this variable causes the number of samples not to be limited (could cause performance issues).
- **RecentSamplesNumberofDays.** This variable controls the number of days of data that is retrieved after selecting a specific **Data Entry Setup**. If left blank, it causes the samples to be unfiltered and could cause a performance issue.
- **RecentSamplesPageSize.** After signing into Statistica Data Entry, the first page will display the recent samples. This variable controls how many rows are displayed before paging is enabled.
- **SampleUpdateTimeout.** The default value is **45**. This variable defines the timeout value in seconds for sample save operations. Sample save operations are serialized, so on very busy Web Data Entry servers this value might need to be increased.
- **SendEmailOnSampleApproval.** Set this to **true** if email notifications should be sent when the **Approve** button is clicked by the approver.
- **SendEmailOnSampleCompletion.** Set this option to **true** if email notifications should be sent when the **Complete** button is clicked by the data entry user.
- **SortSystemView**. When selecting a web form (**Data Entry Setup**) to use in a browser, the folder structure and **Data Entry Setups** are in alphabetical order. Set this option to **false** to see objects sorted by their modification date.
- **UniqueLabels.** These labels must be unique across samples in a **Data Entry Setup**. You can have multiple unique labels on a **Data Entry Setup**. The label names are pipe delimited.

**EXAMPLE:** Batch Number | Batch ID | ID is mainly used when the **Require approval of samples** option is turned on in **Data Entry Setups**. See section Label, Unique Values.

• UseEditMaskForDate. The default value is true. This variable determines whether an edit mask is displayed for date/time labels. If enabled, the mask value is defined by the DateFormat setting. If this value is set to false, dates will still be validated based on the DateFormat setting, but a mask control will not be displayed to control input.

- UserEditMaskToEnforcePrecision: The two types of precision enforcement:
  - The default (**false**) option displays ToolTips about the precision, and only enforces it once data entry is completed on the **Characteristic**. This option offers flexibility.
  - If you only choose to allow users to type the precise amount of numbers, set this option to true.
- WebSTATHost. Name of server where Statistica Server is installed.

#### LoginMessage and MainMenuMessage

We recommend that you edit and view your HTML in another tool before copying it into these variables. Both of these variables are installed with sample text.

The **LoginMessage** is only seen prior to logging into the website on http://[server name]/dataentry.

The **MainMenuMessage** is displayed after logging into the system, and displays under the buttons like **Create New Sample**. See example below:

#### LoginMessage example HTML:

<u>This is example text that should be replaced. </u>This message uses HTML format. administrator will need to modify this text. It is configured via IIS. Select the <em>Start </em>menu, <em>Administrative Tools</em>,<em> Internet Information Services (IIS) Manager</em>. In the <em>Connections</em> section, open your <em>[server name] </em>and then <em>Sites</em>. Select and open <em>Default Web Site</em>. Now you can select <em>Data Entry</em>. Edit the ASP.NET Application Setting <em>LoginMessage</em>. Make sure the HTML is all on one line. New lines are not acceptable in the HTML. Visit:<a href=" https://www.tibco.com"> Statistica Website</a><br/>><a href=" https://www.tibco.com ">Statistica User Forum</a><br/>br/><a href="https://www.tibco.com"><em>Statistica </em> Knowledge Base</a><br/>br/><a href="http://www.statsoft.com/textbook/">Electronic Statistics Textbook</a><i> Statistica Data Entry </i> enables companies to configure data entry scenarios to allow data entry via Web browsers and the analysis of these data using all of the graphical data analysis, statistical analysis, and data mining capabilities of the <i> Statistica Enterprise</i> software platform <br /><br /><i>Statistica Data Entry</i> builds on the configuration objects in <i>Statistica Enterprise</i> Labels: Text or date data for traceability (e.g., Lot Number)
Data Entry Setups: Groups of Characteristics and Labels configured with specific User/Group permissions to collect the appropriate data for particular scenarios

#### MainMenuMessage example HTML:

<b>Updated 4/15/2016 10:49AM</b>This is example text that should be replaced. <br />This message uses HTML formatting.An administrator will need to modify IIS. <br />Edit the ASP.NET Application Setting <em>MainMenuMessage</em>. Visit: <a href="https://www.tibco.com">Statistica</a> <a href="https://www.tibco.com">Statistica</a> <a href="https://www.tibco.com">Statistica User Forum</a> <a href="https://www.tibco.com">Statistica User Https://www.tibco.com">Statistica</a> <a href="https://www.tibco.com">Statistica User Forum</a> <a href="https://www.tibco.com">Statistica User Forum</a> <a href="https://www.statsoft.com/textbook/">Statistics Textbook</a>

## **IIS, Session State**

By default, cookie based sessions are enabled. This option prevents using multiple browser tabs (sessions) within one browser.

To turn off cookies:

- 1. Start IIS.
- 2. Double-click the **Session State** icon.
- 3. Select Use URI from Cookie Settings.

(	Cookie Settings	
	Mode:	
	Auto Detect	4
	Auto Detect	
	Use Cookies	
	Use Device Profile	
	Use URI	

## **Comment Box**

Data entered into the **Sample Comments** box is only visible via http://[server name]/dataentry. This box communicates important information about data entry or approval. These comments are not retrieved with other form data by a **Data Configuration** or **Analysis Configuration**.

If you need to include comments with the data that will be analyzed, create a **Label** to contain this information.

Sample Comments			
		^	
		$\sim$	
Save	Save And Complete		

To increase the size of the comment box, edit the following file on the server:

- File path/name: C\WebSTATISTICAPub\DataEntry\StyleSheet1.css
- Modify the height and width fields in the **CommentsEditor** section.

```
LoginTextBoxClass
    font-size:1em;
    width: 100px;
height: 20px;
}
.CommentsEditor
ł
     position: relative;
   height: 50px;
width: 500px;
              50px;
    display: block;
}
.ButtonClassAdd
    position: relative;
}
ButtonClassRemove
    position: relative;
3
```

## **Electronic Signature on Save**

You can configure the software to prompt for an electronic signature whenever the **Save** or **Save and Complete** buttons are clicked by two methods:

• Modify a configuration file on the server

Here is the option to be added to the file

\WebSTATISTICAPub\DataEntry\web.config:

<!-- If true then when the Save button is clicked prompt for an electronic signature -->

<add key="PromptForSampleSave" value="false"/>

• Adjust an **IIS ASP.NET** setting.

The **IIS ASP.Net** setting is called **PromptForSampleSave** as shown below:



# Web DE Scalability

### **Overview**

By default Web Data Entry is configured to run inside a single ASP.NET worker process.

You now have options that allow the **Web Data Entry Server** to handle an increased number of users.

- 1. Create a **Web Garden** by configuring the application to use multiple **ASP.NET** worker processes on a single server.
- 2. Configure a **Web Farm** with multiple web servers configured to accept requests on a single virtual IP address (while still maintaining the **Web Garden** configuration on each server).
- 3. Optionally, integrate **Web Data Entry** into a **Network load balanced (NLB**) environment where multiple **Web Data Entry Servers** are available to service requests

Both configurations require the **Session State** configuration. The **Web Farm** configuration requires the **Machine Key** configuration. The steps for both of these procedures plus integrating a network load balanced environment are outlined below.

### **Session State**

Whenever you configure **Web Data Entry** for use in a **Web Garden** or **Web Farm**, you must configure an alternate session state mode. It can be one of the following:

- An ASP.NET State Server running on one of the computers in the cluster
- A SQL Server based Session State

The Session State setting is configured in the web.config settings located in the WebSTATISTICAPub\dataentry folder on each Web Data Entry Server. You will find an existing <sessionState/> node in the <System.Web/> section of the Web.Config. The following XML is an example of using an ASP.NET State Service that has been started in the first node in the NLB cluster.

<sessionState mode="StateServer" stateConnectionString="tcpip=WebDE1.tulsa.statsoft.com:42424" cookieless="AutoDetect" timeout="5" />

- **CAUTION:** Keep in mind that using **an ASP.NET State Server** is a single point of failure. If that service is not available, then active Web Data Entry sessions will be lost and new sessions will not be possible until that service is restored or Web Data Entry is configured to use a different **ASP.NET State Ser**ver.
- MORE INFORMATION: Additional information on configuring an ASP.NET State Server or using SQL Server to store session state is available here: https://msdn.microsoft.com/en-us/library/ms178586.aspx.

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## **Machine Key**

A static **Machine Key** setting should be configured if multiple servers (a **Web Farm**) will be configured for Web Data Entry. This setting is not necessary if only a **Web Gar**den has been configured and Web Data Entry will not scale out to multiple servers.

To configure,

- 1. On one of the servers to be used in the cluster, open **IIS Manager**.
- 2. Select the **DataEntry** application, then the **Machine Key** option in the ASP.NET section for that application.
- 3. Click **Generate Keys** and then **Apply**, which will update the web.config in the **DataEntry** folder with the unique keys.

Server Manager			
File Action View Help			
🗢 🔿  🔂 🖬			
Ele     Action     Yew     Help       Server Manager (WEBDE2)     Server Manager (WEBDE2)       Web Server (IIS)     Internet Information Set       Diagnostics     Custon Views       Diagnostics     Custon Views       Hardware Events     Hardware Events       Hardware Events     Hardware Events       Windows Logs     Applications and Service       Yes Subscriptions     StatSoft       Subscriptions     Subscriptions       Subscriptions     Services       Windows Flewal with Adva     Services       Windows Firewal with Adva     Services	Internet Information Service	Sites > Default Web Site > DataEntry >     Machine Key Use this feature to specify hashing and encryption settings for application services, such as view state, Forms authentication, membership and roles, and anonymous identification. Encryption method: TripleDES Degryption method: TripleDES Validation key     Automatically generate at runtime     Generate a unique key for each application 977015AF875441166F9C8662AE2B70C982EF48C0D38B4FFED44D278FC2B1FE854A* Decryption key     Augomatically generate at runtime     Generate a unique key for each application 972015AF875441166F9C8662AE2B70C982EF48C0D38B4FFED44D278FC2B1FE854A* Decryption key     Generate a unique key for each application 92C7BBF145466BA1F28C0C76CD91D0806D43C0B8313BA91F,IsolateApps	Conine Help
		Features View Content View	-

Update the existing <machineKey/> section in the <System.Web> portion of the **web.config** on the other servers in the **NLB cluster**, using the same text.

```
<machineKey decryption="3DES"
decryptionKey="32C7B8F145466BA1F28C0C76CD91D0806D43C0B8313BA91F,IsolateApps"
validation="3DES"
validationKey="977015AF875441166F9C8662AE2B70C982EF48C0D38B4FFED44D278FC2B1FE854A44BC
E52F53F8304831DB65477F261A03C2123FA61CE6B5C05A763088CF5A56,IsolateApps" />
```

## Configuring Web Data Entry to use multiple processes (Web Garden) in IIS

- 1. Select the **DataEntry** application pool in **IIS Manager** and display the **Advanced Settings** dialog box.
- 2. The **Maximum Worker Processes** defaults to **1**. You can increase it to allow multiple w3wp.exe worker processes to service requests.

**NOTE:** As mentioned previously, an Out of process session state mode must be configured to use a Session State Server or a SQL Server based session state

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St E Cl Lii	tart Automatically PU imit	True	
SC CI Lin Lin	PU imit	Irue	-
Lir Lir	imit		-
Li	IMIC	0	
LI			
	Imit Action	NoAction	
LI	imit Interval (minutes)	5	
Pr	rocessor Affinity Enabled	False	
Pt 	rocessor Affinity Mask	4294967295	
	rocess Model	-	
Ic	dentity	LocalSystem	
Ic	dle Time-out (minutes)	20	
<u>الم</u>	oad User Profile	False	
M	laximum Worker Processes	10	
	ing English		
Pi	ing Maximum Response Time (seconc	90	
Pi	ing Period (seconds)	30	
Sł	hutdown Time Limit (seconds)	90	
St	tartup Time Limit (seconds)	90	
🗆 Pi	rocess Orphaning		
Er	nabled	False	
E	xecutable		
E:	xecutable Parameters		
ΞR	apid-Fail Protection		
"c	Service Unavailable" Response Type	Httpl.evel	_

## **Microsoft Network Load Balancing**

The following section contains instructions on how to configure **Microsoft Network Load Balancing** for use with Web Data Entry to create a **Web Farm**. If you have an existing **NLB** technology in place, it can be used instead of **Microsoft NLB**. In general, the load balancer should be configured to use round robin scheduling, and **TCP** port 80 traffic needs to be load balanced.

#### **Installing Network Load Balancing**

Microsoft documentation: http://technet.microsoft.com/en-us/library/cc731695.aspx

Add **Network Load Balancing** as a feature to all servers that will participate in the load balancing cluster.

Add Features Wizard		×
Select Features		
Features Confirmation Progress Results	Select one or more features to install on this server. Eeatures:	Description: <u>Network Load Balancing (NLB)</u> distributes traffic across several servers, using the TCP/IP networking protocol. NLB is particularly useful for ensuring that stateless applications, such as Web servers running Internet Information Services (IIS), are scalable by adding additional servers as the load increases.
	< Brevious Next	> Install Cancel

## Creating a new network load balancing cluster

#### http://technet.microsoft.com/en-us/library/cc771008.aspx

All servers to participate in the cluster will need a network adapter with a static IP address. An additional static IP will be needed for the **Cluster IP**.

#### **EXAMPLE:**

In this example 2 servers with Web Data Entry installed are using the following host names and IP addresses:

WebDE1 - 192.168.0.115

WebDE2 - 192.168.0.116

The Cluster IP used is 192.168.0.117.

A **DNS** entry can be created (decluster.tulsa.statsoft.com) that points to that IP address, although it is not required. Alternatively, the Web Data Entry server could be accessed using the cluster IP directly.

We recommend that you have two network adapters on the NLB computers participating in the cluster.



1. Define a static IP adress for the network adapter. It will be used to service NLB requests.

(i) **NOTE:** It also makes sense to disable Client for Microsoft Networks and File and Printer Sharing for Microsoft Networks.

NLB Adapter Properties	x	
Networking Sharing Connect using:	Internet Protocol Version 4 (TCP/IP General You can get IP settings assigned auto this capability. Otherwise, you need t for the appropriate IP settings.	v4) Properties     ?       matically if your network supports       o ask your network administrator
This connection uses the following items:	<ul> <li>Obtain an IP address automatica</li> <li>Use the following IP address</li> <li>IP address:</li> <li>Subnet mask:</li> <li>Default gateway:</li> </ul>	lly 192.168.0.116 255.255.224.0 192.168.0.222
Link-Layer Topology Discovery Mapp     Link-Layer Topology Discovery Resp     Install     Uninstall     Description     Transmission Control Protocol/Internet Prot     wide area network protocol that provides c     across diverse interconnected networks.	<ul> <li>Obtain DN5 server address auto</li> <li>Use the following DN5 server ad Preferred DN5 server:</li> <li>Alternate DN5 server:</li> <li>Validate settings upon exit</li> </ul>	matically dresses: 10 . 9 . 99 . 71 10 . 9 . 99 . 72 Ad <u>v</u> anced
0		OK Cancel

2. Open the Network Load Balancing Manager (located in Administrator Tools).

	🕌 Remote Desktop Services 🔹 🕨
	💩 Component Services
	🛃 Computer Management
	Data Sources (ODBC)
	Event Viewer
60X x	Internet Information Services (IIS) Manager
, jahr	🧕 iSCSI Initiator
×=	🚡 Local Security Policy
	🧔 Network Load Balancing Manager
vm	N Performance Monitor
	🚡 Security Configuration Wizard
Documents	🛃 Server Manager
	Services
Computer	🙀 Share and Storage Management
Not and	Storage Explorer
Network	System Configuration
Control Panel	Task Scheduler
Condorranci	Windows Firewall with Advanced Security
Devices and Printers	Windows Memory Diagnostic
	🔀 Windows PowerShell Modules
Administrative Tools	Windows Server Backup
Help and Support	

3. Right-click Network Load Balancing Cluster and click New Cluster.

ຢ Network Load Balancing M	anager	
File Cluster Host Options H	lelp	
ा कि कि Network Load Balancing C	New Cluster Connect to Existing	ration for all known NLB clust

- 4. Enter a host name or IP address of one of the servers in the **Load balancing clu**ster. In this example the IPs on the NIC used by the first server was 192.168.0.115.
- 5. After you have connected to the server, select the **Network adapter** that will participate in the cluster. In this example the VM only has one network adapter.

w Cluster : Connect		l l
Connect to one host that i	s to be part of the new cluster an	d select the cluster interface
Host: webde1.tulsa	.statsoft.com	C <u>o</u> nnect
Connection status		
Connected		
luterfaces susibile for ea	eficurina e neu aluster	
Interfaces available for co	Interface IP	
Local Area Connection 2	10.9.102.19	4
NLB Adapter	192.168.0.1	15
	< <u>B</u> ack. <u>N</u> ext>	Cancel Help

6. In the next dialog box, the defaults should be sufficient.

IP address 192.168.0.115	Subnet mask 255.255.224.0
	Add Eda Domouro
nitial host state Default state:	Started
<ul> <li>Betain suspended state</li> </ul>	te after computer restarts

 Add the Cluster IP address (192.168.0.117 in this example). Manually configure the Full Internet name on your DNS servers for it to resolve to the cluster IP address.

uster II	Add IP Address		×
IP add	Add IPv4 addr	ess:	
	IPv4 address:	192.168.0.117	
	Subnet mask:	255 . 255 . 224 . 0	
	C Add IPv6 addr	ess:	
	IPv6 address:		
	Generate IPv6	addresses:	
	Link-local	Site-local 🗖 Global	

8. Next configure the **Cluster parameters**.

iew Cluster : Cluster Parar	neters	×
Cluster IP configuration		
IP <u>a</u> ddress:	192.168.0.117	
<u>S</u> ubnet mask:	255 . 255 . 224 . 0	
Eull Internet name:	livescore.tulsa.statsoft.c	
N <u>e</u> twork address:	02-bf-c0-a8-00-75	
Cluster operation mode		
C <u>M</u> ulticast		
C I <u>G</u> MP multicast		
	< Back Next > Cancel Help	

The **Cluster Operation Mode** option defaults to **Unicast**. This changes the network adapter MAC address so it is the same for all hosts in the cluster.

#### If only one network adapter is available on the server

The hosts participating in the cluster will not be able to communicate with each other. In a Web Data Entry cluster, the hosts should not be required to communicate with each other unless one of the hosts is also a **Session State Server**, **Statistica License Server**. However, using **Unicast** mode with only one network adapter means you may need to manage the NLB cluster using a server that is not part of the cluster.

If only a single adapter is available on the NLB nodes, select **Multicast** and **IGMP Multicast**. This choice adds a layer two multicast address to the network adapter instead of changing the primary MAC address. The hosts within the cluster will be able to communicate with each other even if only one network adapter is present.

To prevent port flooding, if your switch hardware supports **IGMP** snooping, select the **IGMP multicast** option. Otherwise, we recommend standard **Multicast** with manual configuration of the switch hardware for the cluster IP so that only those ports receive the multicast traffic.

#### If you have 2 network adapters

Leave option set to **Unicast**. As stated before, It is preferable to setup the NLB cluster with 2 network adapters on each server that is a member of the cluster.

- One adapter is dedicated to the NLB cluster and can have **Client for Microsoft Networks** disabled. This adapter will have the static cluster IPs assigned to it.
- The other adapter will be used for general network communication and standard (non-NLB) communication between the NLB nodes.

More information is available on the following pages:

http://technet.microsoft.com/en-us/library/bb742455.aspx

http://www.isaserver.org/articles/basicnlbpart2.html

http://technet.microsoft.com/en-us/library/cc782694(WS.10).aspx

http://kb.vmware.com/selfservice/microsites/search.do?language=en\_US&cmd=displayKC&ext ernalId=1006580

1. By default the port rules will load balance all TCP and UDP traffic to the computers participating in the cluster. Web Data Entry is only concerned with TCP traffic on the IIS web site port (usually 80), so edit the port rule as shown in the following image:

Add/Edit Port Rule 🛛 🔀
Cluster IP address
Port range Erom: 80 🛖 To: 80 🚎
Protocols © ICP © UDP © Both
Filtering mode            • Multiple host         Affinity:         • None         C         Single         C         Network         Timeout(in minutes):         0
© <u>S</u> ingle host
© Disable this port range
OK Cancel

NOTE: We recommended setting the Affinity option to None.]

2. Click the **Finish** button on the **Port Rules** dialog box to create the new cluster.



After a short delay you should see the first host listed as a child of the new cluster.

🧔 Netwo	rk Load Balar	ncing Manage	r							-	
<u>File</u> <u>Clust</u>	er H <u>o</u> st Op	tions <u>H</u> elp									
E-gg Network Load Balancing Clusters				Port rules configure	d on WEBDE1 (NLB /	(dapter)					
🖻 💼 decluster.tulsa.statsoft.com (192.168.0.1			(192.168.0.11	Cluster IP address	Status	Start	End	Protocol	Mode	Priority	Lc
L.	WEBDE1(	NLB Adapter)	í	All	Enabled	80	80	TCP	Multiple		Ec
•				•1					1		Þ
Log Eptru	Data	Timo		Host	Description						
0012	4/11/2016	2:41:58 PM	192.168.0	WEBDE2	End configuration d	hande					
0013	4/11/2016	2:49:36 PM	192.168.0	WEBDE1	Begin configuration	change					
0014	4/11/2016	2:49:38 PM	192.168.0	WEBDE1	Waiting for pending	operation 3					
0015	4/11/2016	2:49:55 PM	192.168.0	WEBDE1	Update 3 succeede	d (double click	for details]				
0016	4/11/2016	2:49:55 PM	192.168.0	WEBDE1	End configuration cl	hange					Ţ
•										1	

#### Adding additional hosts to the cluster

1. Select the decluster cluster and select Add Host to Cluster.

🧐 Networ	k Load Bala	ncing Manager						
File Cluste	er Host O	ptions Help						
E 🝰 Net	twork Load B	alancing Clusters		ost configuration info	rmation for ho	sts in cluster declu	uster.tulsa.statsoft.com (19	92.168.0.117)
	decluster.	Add Host To Clu Delete Cluster	uster	ost (Interface)		Status	Dedicated IP address	Dedicated IP subnet ma
	🔜 WEBDI -	Delete Cluster		WEBDE2(Local An WEBDE1(Local An	ea Lonnec ea Connec	Converged Converged	192.168.0.116	255.255.224.0
	_	Cluster Properti	ies		04 0011100	controlged	102.100.0.110	200.200.221.0
		Refresh						
1		Remove From V	'iew					
		Control Hosts	•					
		Control Ports						
1								
•								F
Log Entry	Date	Time	Cluster	Host	Descrip	otion		▲
0001	3/31/2016	3:00:41 PM			NLB M	anager session sta	arted	
0002	3/31/2016	3:00:42 PM			Loadin	g locally bound ins	stances	
0003	3/31/2016	3:00:42 PM			Loadin	g configuration inl	formation from host "Web	DE1.tulsa.statsoft.com" f 🖵
•								F
								1

- 2. Type the name of IP of the host you want to add to the cluster and click **Connect**.
- 3. In the **Connect** dialog box, select the appropriate network adapter for the cluster.

Add Host to Cluster:Co	nnect			×
Connect to the host that Host: webde2 Connection status Connected	is to be added to th	e existing cluster	[	Connect
Interfaces available for c Interface name Local Area Connection	configuring the cluste	r Interface IP 192.168.0.116		
	< <u>B</u> ack	<u>N</u> ext >	Cancel	Help

4. Leave the defaults in the **Host Parameter** dialog.

Add Host to Cluster : Host Parameters 🛛 🗙
Priority (unique host identifier): 2
IP address Subnet mask
192.168.0.116 255.255.224.0
Add Edit Bemove
Initial host state
Default state: Started
Retain suspended state after computer restarts
<u> &lt; B</u> ack <u>N</u> ext > Cancel Help

5. Also leave the defaults in the final dialog, and click the **Finish** button.

Host to Liuster :	Port Ru	les					
Defined port rules:							
Cluster IP address	Start	End	Prot	Mode	Priority	Load	Affinity
All	8081	8081	TCP	Multiple		Equal	None
•							► ►
				Add	Edi	.	Pomorijo
			_	<u>B</u> uu	<u></u> u	<u> </u>	Hemove
Port rule description	۱ <u> </u>						
TCP traffic directed	l to any c	luster IP	address	that arrives	on port 8	081 is bal	anced
<ul> <li>equally across all n assign client conner</li> </ul>	embers c	a specifi	ister. Llien ic cluster	n iP addres: host.	ses and p	orts are u	sed to
_							
		Dook			-		
	`	<u>b</u> auk		inish 🛛	Cano	el	Help

After a short delay, the new host should display as part of the cluster.

🧶 Networ	k Load Balar	icing Manage	r							_ 🗆 ×		
<u>F</u> ile ⊆lust	Elle Gluster Host Options Help											
E Se Network Load Balancing Clusters				Host	Host configuration information for hosts in cluster livescore.tulsa.statsoft.com (192.168.0.217)							
WEBDE1(Local Area Connection)				Host	Host (Interface) Status Dedicated IP address Dedicated IP subnet mask					Initial host state		
				🔜 W	/EBDE1(Local Area Connec	Converged	192.168.0.115	255.255.224.0	1	started		
WEBDE2(Local Area Connection)			🔜 🔛	/EBDE2(Local Area Connec	Converged	192.168.0.116	255.255.224.0	2	started			
				•								
Log Entry	Date	Time	Cluster	Host	Description					-		
0005	5/2/2014	4:24:36 PM	192.168.0	WEBDE1	Update 2 succeeded [d	ouble click for det	tails]					
0006	5/2/2014	4:24:36 PM	192.168.0	WEBDE1	End configuration chan	ge						
0007	5/2/2014	4:27:28 PM	192.168.0	WEBDE2	Begin configuration cha	nge wation 2						
0008	5/2/2014 5/2/2014	4:29:25 DM	192.100.0	WERDE2	Waiung for pending ope	srauun z ouble dick for det	taile 1					
0010	5/2/2014	4:28:35 PM	192.168.0	WEBDE2	End configuration chan		construit			-		
1						-						

If you look at the TCP/IP properties of the network adapter used for the cluster you will see that the cluster IP has been added as an additional IP address.

Adva	dvanced TCP/IP Settings ? 🗙								
IP S	IP Settings DNS WINS								
	IP address		Subnet mask						
	192.168.0.115		255.255.224.0						
	192.168.0.117		255.255.224.0						
	,	<u>A</u> dd	<u>E</u> dit	Remo <u>v</u> e					
	Default gateways:								
	Gateway		Metric						
	192.166.0.222		Automatic						
		A <u>d</u> d	Edi <u>t</u>	Re <u>m</u> ove					
F	Automatic metric								
	I <u>n</u> terface metric;		]						
			ОК	Cance	!				

#### Post installation steps

If you selected unicast mode when setting up the cluster, and each node in the cluster has only one network adapter, you may need to provide Statistica with certain license files to be resigned (if the License Service is installed to one of the nodes in the NLB cluster). You will also need the new cluster MAC address. Open a command prompt and type ipconfig /all to acquire the new MAC address:

📾 Administrator: C:\Windows\system32\cmd.exe 📃 🖂
DNS Suffix Search List : tulsa.statsoft.com
Ethernet adapter Local Area Connection:
Connection-specific DNS Suffix . :
Description
DHCP Enabled.
Autoconfiguration Enabled : Yes
IPu4 Address
Supnet mask
Subnet Mask
Default Gateway
DNS Servers
NetBIOS over Tcpip : Enabled
Tunnel adapter isatap.{FC3EFC87-777C-4D16-87CD-E8258A0379ED}:
Media State Media disconnected
Connection-specific DNS Suffix . :
Description Microsoft ISATAP Adapter
DHCP Enabled.

In this example, the licensing file needed would be:

<u>C:\Program Files (x86)\Statistica\FlexLM\stat.lic</u>

# **Troubleshooting**

## **User Interface Slow to Load**

If the **Web Data Entry User Interface** is slow to load after logging in, the list of recent samples might be too long. When that happens, populating a list is time-consuming. Try shortening the list of recent samples by changing the following **Application Settings**:

- GlobalRecentSamplesMaxNumber
- GlobalRecentSamplesNumberOfDays
- RecentSamplesMaxNumber
- RecentSamplesNumberOfDays

See the System Options, IIS section above.