

Spotfire Statistica®

Data Entry Administration

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Overview

Spotfire Statistica[®] Data Entry Server is installed on a Windows server. The administrator can configure two types of users.

- First user can author the web forms and author analytic workspace that analyze the manually entered data. This work is saved in Statistica metadata store (database).
- Second user can consume the web form to manually enter data. This work is saved in Statistica metadata store (database).

These web forms are created, configured, versioned, approved, modified with the Statistica Enterprise Manager application. This application is the administrator's user interface for the metadata store (database).

This means that the user entering manual data in a web form and the user creating the web form are connected to the same metadata store.

Understanding the objects (metadata) managed with Statistica Enterprise Manager application is a useful starting place. The following image shows the relationships between these different objects.



Spotfire Statistica® Data Entry Objects

The following objects are used to create web forms.

• Characteristics: Numeric fields for a web form

- **Example:** pH, this is measured in numbers varying from 0-14.
- Labels: Text or date data for a web form
 - **Example:** Lot Number, this could be an alphanumeric value AB01234.
- **Data Entry Setups:** Groups of characteristics and labels configured with specific User/Group permissions to collect the appropriate data using a web form
- Data Entry Setup Sequences: Grouping and ordering of Data Entry Setups

In the Statistica Enterprise Manager application, data entry administrators create the web forms (Data Entry Setups) and save them in the System View folder. By using these Data Entry Setups, users gain access to enter data and approve entered data.

You can also group multiple Data Entry Setups together and order within the Data Entry Setup Sequence. After the setup is done, the sequence guides you from one form to the next during data entry.

Open a browser in Internet Explorer, Chrome, or Firefox and visit the URL to use the data entry forms, such as http://[servername]/dataentry. If you are using Internet Explorer 11, switch to compatibility mode.

Installation

Spotfire Statistica[®] Data Entry Server has the following components (applications and services), installed on the same server:

- The Spotfire Statistica[®] and Statistica Enterprise Manager applications, create and test web forms, ad hoc analysis, analysis templates (workspaces)
- Data Entry Server, web service

Software requirements for installing the Statistica software:

- Internet Explorer, Chrome, Edge, or Firefox installed on client computers
- IIS with ASP.NET configured for ISAPI and CGI
- .Net 4.8
- Administrator login account/password for the database server

Installation tips and observations:

- Choose to create a new database during installation or to use an existing Enterprise database.
- Typically Statistica Enterprise Server and Statistica Data Entry Server use the same database.
- Statistica Data Entry Server supports Oracle or SQL server.

Definitions

Explanation of some important terms used in Spotfire Statistica®.

Term	Definition		
Analysis Configuration	Settings within Statistica Enterprise Manager that control the analysis of data, including IQC, SVB, Ad hoc, and R configurations.		
	Permissions: Users who create Analysis Configurations must have the Analysis Admin (AADM) permissions.		
	Typical workflow:		
	 Author: An analyst, data scientist, engineer, or project lead creates the configuration. This configuration can be a code or no-code workspace. 		
	2. Consumer:		
	• A business user logs in to WebStatistica (job server) to execute the configuration on demand.		
	 The configuration is scheduled to execute every 10 minutes to see if a process is out of specification limits, which triggers an alarm by sending an email. 		
	• An external application calls the configuration. If this configuration is a workspace then it can also be executed through a Spotfire Data Function.		
	Note: These configurations can also be executed to generate reports.		
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	The following methods can be used for reviewing, approving, and electronically signing data that has been entered:		
	Approval of sample		

Term	Definition		
	 One person enters data. 		
	 Second person manually reviews entered data and approves or rejects data. 		
	• Blind data entry, manual approval		
	 Two people enter the same data. 		
	• The system compares the two samples.		
	 A third person logs in to the system and reads report about the differences between the two samples. 		
	 A third person approves or rejects the data. 		
	• Blind data entry, automatic approval		
	• Two people enter the same data.		
	• The system compares the data.		
	 The SYSTEM user approves or rejects the data. This user is created by the installation process and cannot be deleted. 		
Double Blind	Also known as blind data entry		
Data Entry	• Two people enter the same data.		
	 The accuracy of the data entry is verified by comparing the two different records. 		
Characteristic	Numeric data to be collected for analysis, such as pH.		
	Note: To verify the numeric data and improve the accuracy of data entry, set up reasonable lowest and highest limits on a Data Entry Setup (web form).		
Configuration or Object	Objects managed with Statistica Enterprise Manager, such as Data Configuration.		
Database Connections	Settings (OLE DB or ODBC provider, login name, password) that control the connection to the database.		

Term	Definition
	Note: You must have Database Admin access permissions to create these connections. This access must be given to only the key employees such as IT administrators.
Data	• Settings (SQL and filtering criteria) that control querying data.
Configuration	 Grant Data Admin (DADM) permission to users who create data configurations.
	 Create the Database Connection prior to creating the Data Configuration.
	 Create this Data Configuration prior to creating an Analysis Configuration.
	 Access permission must be granted to users who need to access raw data to run this configuration.
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 the data entry staff use.
Data Entry Setup Sequence	It can also be referred to as a Sequence. Administrators use this to change the order of web forms.
	Example: Data must be entered on the Monday form before data is entered on the Tuesday form.
Data Entry (DE)	Data entry user permission
	Example: A user with this permission can open http:// [servername]/dataentry with Internet Explorer and start entering data.
Data Entry Approver (DEAPPRV)	Users with this access permission can open http://[servername]/dataentry with Internet Explorer and approve data or requests data revisions.
Data Entry Admin (EDE)	Data entry administrator user permission that allows creating characteristics, labels, and data entry setups.

Term	Definition
Historical Edit (HEDIT)	Historical edit user permission that allows editing data after it has been marked Complete .
IQC (Interactive Quality Control)	A type of Analysis Configuration.
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
	Two types of metadata.
	 Metadata used to describe or classify data. This type of metadata can be captured with a Label on a web form, or can be a Data Entry Setup's name or a System View Folder's name.
	Example: A process can be upstream or downstream.
	 Metadata used to describe information saved within the configurations.
	Example: A Database Connection contains metadata on how to connect to database type (Oracle, SQL Server, Access, and flat file), login account, and password.
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	This application is used for ad hoc analysis and authoring analytic templates (workspaces). When Statistica is installed on a server, users can access it by using RDS or Citrix. Statistica can also be installed on a client

Term	Definition
	computer.
Statistica Enterprise Manager	This application is installed with Statistica. It is the user interface to manage the metadata store. It uses role-based security to manage who is allowed to view, create, modify or delete objects such as database connections, data configurations, data entry setups, and analysis configurations.
Statistica Query	This utility application is installed with Statistica and Statistica Enterprise Manager. 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, and Sybase) using Microsoft's OLE DB or ODBC conventions.
Statistica Data Entry Server	This product is also known as DES. Users log in to the server using a browser. They select a web form and then manually enter data. The URL for this server is http://[server-name]/dataentry. https can also be used.
	publish them to specific users for data entry.
SVB	The Statistica Visual Basic (SVB) programming language is a super-set of the industry standard Visual Basic language.
System View	The folder structure defined in the Statistica Enterprise Manager application to organize the storage of configurable objects. A Data Entry Setup object is saved in a folder in the System View.
URL	Uniform Resource Locator. The address of a web page on the World Wide Web.
WebStatistica	This component is included in the Spotfire Statistica Server product. It is an analytic job server.

Unique Values for a Label

A label that contains 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 must be compared.

Three methods for identifying a label as unique:

- Method One: Select Require approval of samples as the approval type on the Data Entry Setup. For configuration details, read Data Entry Setup that now requires a unique value.
- Method Two: Select Blind data entry as the approval type on the Data Entry Setup. While creating the object, the user is prompted to declare a Blind ID. Data Entry Setup now requires a unique value.
- **Method Three:** 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 Setup. All data entered into the system now requires unique values.

Users and Groups

You can use either the Statistica Enterprise Manager application or the OIDC provider to manage users and groups.

Managing Users and Groups in Statistica Enterprise Manager

- Native Statistica users are created and only exist within the Statistica application.
- Windows domain users are imported.

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

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

Managing Users and Groups in an external OIDC provider

Statistica Enterprise Manager can be configured to assign groups from a custom claim from the OIDC provider. More information can be found in the "External Authentications" section.

Permissions

In Statistica, the following two-level group structure is widely used for permission management:

- **System level groups**, which define what applications or areas of the system their users can access. Typical names for system level groups are Data Entry Admin, Data Entry Approver, Data Entry User.
- **Object level groups**, which 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 System Admin (SADM) has the following permissions that can be applied to users or groups:

- **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 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 Setup
	Go to Next Step
	Launch Data Entry
	Explore
	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 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 request for revision. This user cannot be deleted or modified.

Workflow

The different levels of data entry user permissions ensure that users at different permission levels follow a workflow that protects the system against missing or incorrect data. The workflow requires that the data be complete and approved.

Example 1

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

Procedure

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



Note: In this workflow, you need not use a unique value in a sample label field; however, you can use a unique value in UniqueLabels. See the System Options, IIS section.

- 2. A user with **Data Entry (DE)** permissions enters the data. The data can be saved at any point and you can come back and add or edit data in the form.
- 3. Later, the user with **Data Entry (DE)** permissions logs in to the website, http:// [servername]/dataentry again to enter more data and select the **Complete** option.

The data must be complete before it can be approved. After a sample is marked as 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 record with **Complete** status.

- 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, 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** Configuration from the Data Entry Setup. The administrator can also create an Ad hoc Analysis Configuration with filtering turned on.



Note: Data Configurations and Analysis Configurations are created for Data Entry Setups for analysis. They can be configured to only include completed data and 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 might also run the **Ad hoc Analysis Configuration** to perform other analyses on the data.

Example 2

This workflow walks you through the process for data entry when Blind Data Entry is used. The workflow assumes that Characteristics and Labels were already created.

Procedure

- 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 user. 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 contains a unique value: LOT123.).
 - b. Decides what other fields (Characteristics and Labels) must be compared by the system. Two people 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 is allowed to not match with the other entry and the data record still be approved. This might 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 receives 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 did not match. Both users must review all the fields that they entered to ensure that the values are correct.

- c. After this review, the users who received the required revision notification complete the data again.
- Note: If the two users have difficulty matching their data records, they can log in to 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 in to http://[server name]/dataentry, reviews the difference report on the data, clicks the **Approve** button, and electronically signs approval.

Data Entry Options in Enterprise

This section explains the Data Entry Options in Enterprise.

Audit Log

Starting with 14.0 version, the audit log is enabled by default and cannot be disabled.

This log is viewable in the Statistica Enterprise Manager application. Events are recorded for Analytic Configuration, Analysis Execution, Characteristic, Data Configuration, Data Entry Setup, Data Entry Setup Sequence, General Document, Hadoop Distributed File System connector, Label, MAS Dashboards, MAS Tasksets, System Options, and Users and Groups. Examples of events are add, approve, associate, attach, change, copy, create, delete, detach, disable, enable, log off, log on, move, override, run, send email, sync, and upload.

To modify manually entered data, the LogAllSampleChanges IIS setting must be set to true. The person viewing the sample or entering data can click the **View Sample Revision History** button to see this audit trail.

Data Entry

The Statistica Enterprise Manager application is used to configure system settings for all Data Entry Setups. Start the application and go to **System Options > Data Entry**.

Option	Description
When creating a new Analysis Configuration based on Data Entry Setup, automatically add "All" to the criteria for	Select this checkbox to automatically add all to the criteria for all labels in the Data Entry Setup when creating an Analysis Configuration based on a Data Entry Setup .

Option	Description
all Labels in the Data Entry Setup	
URL for Sample Editing	The system uses the URL for Sample Editing box for outbound email notifications on data entry tasks. You can typically set it as http://[servername]/dataentry. The example email in the next image uses this URL.
Retrieve all data for characteristics, independent of Data Entry setup	This is not a common scenario. You usually create one Characteristic and use it across many Data Entry Setups . You can also analyze the Characteristic data based on one Data Entry Setup form. This option is not enabled by default. Select this checkbox only if you are interested in analyzing the characteristic data across all the Data Entry Setups.
Prompt for electronic signature on sample completion Prompt for electronic signature on sample approval	 Regulated customers typically select both of these options. These options prompt for an electronic signature when the following actions occur: A user with data entry permission clicks the Complete button Approver clicks the Approve button
Allow users to approve	This option is typically not selected in validated environments if

Option	Description
their own samples	the Require approval of samples option on Data Entry Setups is used. Regulated industries typically do not allow the same person to enter data and approve the data. However, this option can be useful for testing new Data Entry Setups in development or non-validated environments.
For Blind Data Entry, user making last change can also approve	This option along with Allow users to approve their own samples might be enabled when using Blind Data Manual Approval on Data Entry Setups . In this case, two people enter the data. The second person also approves the data. If these two options are turned off, you need three people to do data entry and approval.
Default database connection for creating a Data Configuration off Data Entry Setups	A database connection for the Enterprise Database (SEWSS) must be created and entered in this textbox. You can right-click the Data Entry Setup and create a Data Configuration and extract data for analysis.
Query time out	The default value is -1. Discuss with Spotfire Support before changing this.



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

External Authentications

The Statistica Enterprise Manager application is used to configure system settings for all External Authentication Setups including Data Entry, Statistica Server, Live Score Server, and WebStatistica. Start the application and go to System Options > External Authentication.

Option	Description
Discovery URL	A URL of an OpenID Connect (OIDC) provider that provides a list of metadata, such as endpoints and other data.
Client Id	This is a credential from the OIDC provider that establishes the authorization integration.
Client Secret	Enter the client secret if available.
Redirect URL	The URL that receives responses from the endpoint where the external authentication server redirects users to specific actions, such as signing in or signing out. This field is optional. If it is left empty, then Statistica constructs the redirect URL from the server base URL. This can be overridden in Data Entry through the web.config if there is any potential problem in a network configuration or multiple Data Entry servers.
Default Group	A group that is assigned to users in the OIDC directory if there are no permissions derived from the groups claim.
Use groups claim	This option is to map the value of groups claim in an ID token to EM groups. When you select this checkbox, it overrides the Default Group.
Domain account mappings	Enable mapping to domain accounts in Enterprise. If you enable this option, Enterprise uses the claims userName, login, sAMAccountName or objectSid and tries to map an idToken to a domain account. The userName and login should be in UPN format. The sAMAccountName should be in DOMAIN/username format. The objectSid is a Windows SID.

Option	Description
Use Email Addresses as Login Name	You can now use email addresses as the login names. If you enable this option, Active Directory converts the email claim to DOMAIN\username . If it is successful, the DOMAIN\username is mapped to a domain account in Enterprise. This option is used only when the claims userName , login , sAMAccountName or objectSid fails to map to a user.
Use PKCE	Select the Use PKCE checkbox to use the PKCE security feature.
Bypass login page	Select the Bypass login page checkbox to skip the standard login page and navigate directly to the OIDC provider login page.
Sign out on the exit	Select the Sign out on the exit checkbox to log out of the Identity Service by logging out in Web Data Entry.
Validate endpoints	Select the Validate endpoints option to enforce the protocol endpoints are on the same DNS name as the authority.

Configuring a Data Entry Server to use OpenID Connect (OIDC)

Users can configure a Data Entry Server by adding an entry in web.config and the name of the configuration. An example is

<add key="ExternalLoginConfiguration" value="Data Entry Server 1"/>

Users can also specify a separate configuration to obtain electronic signatures than the one used to log in. The value should be either the name of the new configuration or, if using the Okta API to authenticate users, the value of UseOktaAPI.

For example

```
<add key="ElectronicSignatureConfiguration" value="Data Entry Server 1 - Password only"/>
```

Or

<add key="ElectronicSignatureConfiguration" value="UseOktaAPI "/>



.NET 4.8 is required for External Authentication. To enable this, edit this keyvalue pair from:

```
<compilation debug="false" strict="false" explicit="true" targetFramework="4.0">
```

to

```
compilation debug="false" strict="false" explicit="true"
targetFramework="4.8">
```

Data Entry Options in IIS

This section explains the Data Entry Options in IIS.

IIS, Session State

By default, cookie-based sessions are enabled. This option prevents use of multiple browser tabs (sessions) within one browser window.

To turn off cookies:

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

C	ookie Settings	
I	/lode:	
1	Auto Detect	~
4	Auto Detect	
ι	Jse Cookies	
l	Jse Device Profile	- 1
l	Jse URI	- 1

Comment Box

Data entered in the **Sample Comments** box can be viewed by accessing 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 is 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: C\WebSTATISTICAPub\DataEntry\StyleSheet1.css
- Modify the height and width fields in the **CommentsEditor** section.



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.

Add this option 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:



IIS, Application Settings

You can use the Internet Information Services (IIS) to set the application settings for your web server.

- On Windows Server 2012, start the Server Manager application > Tools menu > Internet Information Services (IIS) Manager.
- On Windows Server 2016 or 2019, search for IIS and open it.
- In the Connections section, open your [server name] and then Sites. Select and open

Default Web Site. Select DataEntry.



• Double-click the **Application Settings** icon to display the list of application settings.

Application Settings	Description
Aspnet:MaxHttpCollectionKeys	Defines the maximum number of form elements that can exist on an ASP.NET page. Add this IIS option if you are using forms with more than 1000 fields; otherwise, the save action fails.
	Note: Some versions of ASP.NET default to 1000 form elements, which can cause problems when saving large data entry forms.
AutoLoadQueryLabelValues	Valid values are true and false. By default the value is set to true. Automatically loads the query label values if the query label has no dependencies or its dependencies have values defined.
BlindDataEntryHideMatchingValue	Valid values are true and false. By default the value is set to false. Set the value to true if you do not want to display the Matching Value column on the Recent

Application Settings	Description
	Samples list. This list is displayed after you log in 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 to 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.
	When the process if option is set to true:
	 The second person sees a blue icon next to LOT123.
	• The user clicks the icon to automatically create a new form and populates the label with LOT123.
BlindDataEntryMakePrimaryOnSave	Do not change without discussing with Spotfire Support. It must be false for most customers.
BlindDataEntyrPrepopulateMatchingSample	Specific to when Blind Data Entry is enabled for a Data Entry Setup . Possible values are true and false. By default the value is set to false. If the value is set to true, when a matching sample is created, the values from the primary sample are automatically prefilled for inputs that are not part of the Blind Data Entry comparison.
BlindDataEntryShowUnmatchedValues	Specific to when Blind Data Entry is

Application Settings	Description
	enabled for a Data Entry Setup . Possible values are true and false. If the value is set to true, when differences occur when the primary or matching sample are saved, the different values from the other sample are displayed. When set to false, only the input name and piece numbers of the differences are identified, and the actual different value from the other sample is not visible.
BlindDataEntrySyncFields	Specific to when Blind Data Entry is enabled for a Data Entry Setup and there is a field that does not match between two samples. In other words the Use this field matching the two Blind Data Entry samples checkbox is not selected.
ByColumnsFirstColumnWidth	When a data entry form is configured to display the inputs by columns, use this setting to set the width of the first column displayed.
ByColumnsWidth	Use to set the column width for fields on the Data Entry pages.
ByRowsFirstColumnWidth	When a data entry form is configured to display the inputs by rows, use this setting to set the width of the first column displayed.
ByRowsWidth	Use to set the width of the rows for the Data Entry pages.
CommentNotRequired	The default value is false. If this is set to true, then modifications (save, delete, approve) do not require text in the

Application Settings	Description
	Comments field. The Comments field is part of every form and is not part of the data. Therefore if a customer wants a comment with the data entered in the form, they must create a Sample Label to contain this information and set this to true.
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 required to enter a comment only 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 uses 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 can be entered as 10/1/2010 but displayed as ddMMyy.
DateFormatLocale	If this option is defined, it forces 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.

Application Settings	Description
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 form 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.
EditMaskInteger	Integer format string used when UseEditMaskToEnforcePrecision is defined as true. The default value is 9999999999, which allows the you to enter up to 10 numbers for an integer value.
EmailFromAddress	Set the From email address used when sending validation status.
EnvironmentName Description	If PDFOutput option is true, set EnvironmentName to a text string like

Application Settings	Description
	production or project A. This string displays in the generated PDF.
FixedHeaders	The default value is true. If set to false, the left column headers are not 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 be unlimited and can cause performance issues.
GlobalRecentSamplesNumberOfDays	After signing into Statistica Data Entry , the first page displays 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 can 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 can take up to 75 seconds for the WBDE feature being consumed to be released. The smaller the value, the more often the client needs to communicate with the Web

Application Settings	Description
	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 are 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 in to Data Entry. Copy your HTML code into the variable. Ensure that the HTML is all on one line. New lines are not acceptable.
LoadSystemViewFoldersOnDemand	The default value is false. This option is used with TreeRecursionLevel to tune performance. If this option is set to true, then all the folders are loaded into memory when the user signs in to the application. This can slow down the login process if there are hundreds of folders which have hundreds of child folders. If there are only a few folders, then the login process does not have any performance issues.
LogUserActivity	The default value is false. If set to true, event log entries are entered into the Statistica application event log for the following events:
LogUserActivity	The default value is false. If set to true, event log entries are entered into the Statistica application event log for the following events: • User login

Application Settings	Description
	 User logout – (This event is triggered only when the serialized session state is not enabled)
MainMenuMessage	Leave this field blank. It is no longer supported.
MasterPageLogo	This option displays the file name of the image that is displayed in the upper-right corner.
MaxParentSamples	Specific to Data Entry Setups that are included in a Data Entry Sequence . Default is 1 level of samples. This is the maximum level of parent samples used when evaluating constraints and calculated formulas. Formulas can use variables (fields) from other forms to calculate values. Change this to 0 and all parents within a sequence are used. This can slow down the computation speed. For example, a sequence session has 2 parents (data entered into 2 top-level forms) and 20 children samples (data entered into 20 forms) and the last sample loads all 22 forms into memory every time a calculated formula is evaluated.
PDFOutput Description	WebSTATHost setting cannot be empty. Set to true to display PDF button within a Data Entry form (Data Entry Setup). Click on button to generate PDF.
PersistSystemViewState	If this option is set to true, Data Entry saves a system view state from the database to improve the performance of Data Entry when a user logs in.
Application Settings	Description
---------------------------	---
PromptForSampleSave	The default value is false. If set to true, when you click the Save button, you are 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 restricts the maximum entries populated in the Query label combo box.
QueryTimeout	Timeout value for query operations. By default the value is "" (blank), which means the database default setting is used.
RecentSamplesLabels	After signing into Statistica Data Entry, the first page displays 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, there is no restriction on the maximum number of samples. However, doing this can slow down the performance.
RecentSamplesNumberofDays	This variable controls the number of days of data that is retrieved after selecting a specific Data Entry Setup . If left blank, there is no control on the number of retrieved samples. This can slow down the performance.
RecentSamplesPageSize	After signing into Statistica Data Entry, the first page displays the recent samples.

Application Settings	Description
	This variable controls how many rows are displayed before paging is enabled.
RequireApprovalOnDelete	Default value is false. Set this to true and a second user with HEDIT permission must login to approve the deletion of the sample.
RequireSignatureOnDelete	If this option is true, the system prompts to enter your signature after deleting the sample.
	Note: The option RequireApprovalOnDelete takes precedence over this new option, this option will only be in effect when RequireApprovalOnDelete is false.
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 must be sent when the approver clicks the Approve button.
SendEmailOnSampleCompletion	Set this option to true if email notifications must be sent when the Complete button is clicked by the data entry user.
SkipSearchingForMatchingSamples	If this option is set to true, Data Entry uses the matching table rather than searching for a match at runtime for enhanced

Application Settings	Description
	performance.
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.
TreeRecursionLevel	The default value is 1 and only changes performance if LoadSystemViewFoldersOnDemand is set to true. The recursion level tells the system how many levels to load when the user expands folders in the user interface.
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.
UseDatabaseLock	By default the value is false. Set to true to enable database synchronization across servers/processes with Web Data Entry.
UseDateTimeLabelDisplayFormat	By default the value is true and the date/time labels use the DateFormat configuration option. Set to false to use the display format configured in Statistica Enterprise Manager.

Application Settings	Description
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 can still be validated based on the DateFormat setting, but a mask control is not displayed to control input.
UserEditMaskToEnforcePrecision	The two types of precision enforcement:
	 The default (false) option displays ToolTips about the precision, and only enforces it after 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.
UseMTAObjects	The default value is false. Do not change without discussing with support. It must be false for most customers.
UseSeparateConnection	This option optionally avoid the default mode of creating a separate connection when running samples searches. It is recommended for customers who use Oracle to set this option to true and for customers who use SQL Server to set this option to false.
WebSTATHost	Name of server where Statistica Server is installed.

Settings for Importing Data

When uploading large spreadsheets (larger than 2000+ new samples), the execution timeout option may need to be increased to accommodate the upload. This option can be changed in two locations:

The web.config file, which applies the changes for the entire Statistica Data Entry web application:

```
<httpRuntime executionTimeout="3600" apartmentThreading="true" enableVersionHeader="false"/>
```

Adding a specific import configuration to the end of the web.config file. This ensures that the timeout change is only applied for the specific import request. Here you can also define the file size.

```
<le><location path="DataImport.aspx">
  <system.web>
  <!-- 3600s timeout and and 50MB in kilobytes -->
  <httpRuntime executionTimeout="3600" maxRequestLength="51200" />
  </system.web>
  <system.webServer>
    <security>
    <requestFiltering>
    <!-- 50MB in bytes --><requestLimits maxAllowedContentLength="52428800"
/>
  </requestFiltering>
  </security>
  </system.webServer>
  </location>
```

Blind Data Entry Options

The most common use case for this option is a Sample Label that is named Notes or Comments. This field is used to hold comments to communicate between the two people entering the data. Possible values are true and false. By default the value is set to false.

l	abels/Characterist	ics:								
	Required/Type	Name		Sample Siz	Defaul	Fomula	Match for Blind DE	Required for Blind DE	Blind ID	Add label
	Separator	Bake A Cake								Add abarrates and
	✓ Label	Unit Operation Identifier		Sample			Yes	Yes	Batch ID	Add characteristic
	Label	Previous Unit Operation Iden	ntifier	Sample			Yes	Yes		Add separator/link
	✓ Label	Unit Operation Description		Sample			Yes	Yes		
	✓ Label	Oven Identifier		Sample			Yes	Yes		Remove
	Label	Bake Start Date		Sample			Yes	Yes		
	Label	Bake End Date		Sample			Yes	Yes		
	Separator	Measurement Data Entry Ins	tructions	-						Edit
	Label	Measurement Time		Piece			Yes	Yes		Blind data entry
	Characteristic	Oven Temp in Fahrenheit		2		1/200	Tes	Tes		Dirid data critiy
	Characteristic	Oven Temp in Celsius		2		=round(("O	Yes	Yes		
	□ Separator	Comment		Samela			No	No		
		Mileeconde	(TTT)	Sample			IND	INO		7
	Label	Millipeconos	I Blind	i Data Entry op	tions			?	×	
			🗹 Use ti	his field matching	the two B	ind Data Entry si	amples			
				Required for Blind	Data Entr	this field must r	match between the bli	nd samples and cannot b	be	
				vemidden by a m	anual appr	over)				
			Use ti	his label as Blind	Data Entry	Sample ID				
			This	label has Tracea	ability option	Batch ID" set;	if no explicit Sample I	D property is defined, the	in the	Locate
			syste	an we use this id		ampre iD.				
	<							ОК	Cancel	▲

If the value is set to true, then the two people doing manual data entry share this field. The following is an example workflow:

- 1. **Data Entry Person 1:** Enters data on form. This is the Primary Sample. They type "XYZ" in the **Sample Label** field. They save the form but don't mark it complete. This value is not compared (matched) between the two samples. This field can be used to communicate with the second person who is doing data entry.
- 2. **Data Entry Person 2:** Enters the Matching Sample. They see "XYZ" in the **Sample Label** field. They can now append additional text to this comment or replace all the text with "ABC". They save the form and mark it complete.
- 3. **Data Entry Person 1:** Views the Primary Sample. They see "ABC" in the **Sample Label** field. They append text so the **Sample Label** field now contains "ABC XYZ". They save the form and mark it complete.
- 4. Data Entry Person 2: Views the Matching Sample and sees "ABC XYZ".

LoginMessage

It is a good practice to 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 seen only before you log in to the website on http://[server name]/dataentry.

The **MainMenuMessage** is displayed after logging into the system. See the following example:

LoginMessage example HTML:

<u>This is example text that should be replaced.</u>This message uses HTML format. An administrator will need to modify this text. It is configured via IIS. Select the Start menu, Administrative Tools, Internet Information Services (IIS) Manager. In theConnections section, open your [server name] and then Sites. Select and open Default Web Site. Now you can select Data Entry. Edit the ASP.NET Application Setting LoginMessage.Make sure the HTML is all on one line. New lines are not acceptable in the HTML.Users open a browser and log into Statistica Data EntryServer to manually enter data into web forms. The web forms are created, configured, versioned, approved, modified with the Statistica Enterprise Manager application. This application is the administrator's user interface for the metadata store (database). In other words, the user entering manual data in a web form and the user creating the web form are connected to the same metadata store.

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.

- Create a **Web Garden** by configuring the application to use multiple **ASP.NET** worker processes on a single server.
- 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.
- 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 in the following way.

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 can 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.

```
<sessionStatemode="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 are lost and new sessions are not possible until that service is restored or Web Data Entry is configured to use a different **ASP.NET State Server**.

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.

Configuring Machine Key

A static Machine Key setting must be configured if multiple servers, as in a Web Farm, are configured for Web Data Entry.

This setting is not necessary if only a Web Garden has been configured and Web Data Entry does not scale out to multiple servers.

Procedure

- 1. On one of the servers to be used in the cluster, open the IIS Manager dialog.
- 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 updates the web.config in the **DataEntry** folder with the unique keys.



4. Update the existing <MachineKey> section in the <System.Web> portion of the web.config on the other servers in the **NLB cluster**, with the same text.

```
decryptionKey="32C7B8F145466BA1F28C0C76CD91D0806D43C0B8313BA91F,Iso
lateApps"
validation="3DES"
validationKey="977015AF875441166F9C8662AE2B70C982EF48C0D38B4FFED44D
278FC2B1FE854A44BC
E52F53F8304831DB65477F261A03C2123FA61CE6B5C05A763088CF5A56,IsolateA
pps"/>
```

Configuring Web Data Entry

<machineKey decryption="3DES"

You can configure Web Data Entry to use multiple processes, as in Web Garden, in IIS.

Procedure

- 1. Select the **DataEntry** application pool in **IIS Manager**. This opens the Advanced Settings dialog.
- 2. The **Maximum Worker Processes** default value is 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.

Ad	٧a	anced Settings	? ×
_			
		Start Automatically	True
	-	CPU	
		Limit	0
		Limit Action	NoAction
		Limit Interval (minutes)	5
		Processor Affinity Enabled	False
		Processor Affinity Mask	4294967295
	Ξ	Process Model	
		Identity	LocalSystem
		Idle Time-out (minutes)	20
		Load User Profile	False
		Maximum Worker Processes	10
	J	Pingendel	
		Ping Maximum Response Time (second	90
		Ping Period (seconds)	30
		Shutdown Time Limit (seconds)	90
		Startup Time Limit (seconds)	90
	Ξ	Process Orphaning	
		Enabled	False
		Executable	
		Executable Parameters	
	Ξ	Rapid-Fail Protection	
L		"Service Unavailable" Resnonse Type	Httpl.evel
	Μ	aximum Worker Processes	
	[m re po	naxProcesses] Maximum number of wor quests for the application pool. If this r ool is a "Web Garden".	ker processes permitted to service number is greater than 1, the application
L			OK Cancel

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 must be configured to use round robin scheduling, and TCP port 80 traffic needs to be load balanced.

Installing Network Load Balancing

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

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



Creating a new network load balancing cluster

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

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

Example

In this example, two servers with Web Data Entry installed use 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.domain.com) that points to that IP address, although it is not required. Alternatively, the Web Data Entry server can be accessed using the cluster IP directly.

It is a good practice to have two network adapters on the NLB computers participating in the cluster.



Procedure

1. Define a static IP address for the network adapter. It is used to service NLB requests.

1 Note: You must disable Client for Microsoft Networks and File and **Printer Sharing for Microsoft Networks.**

🕴 NLB Adapter Properties	×	
Naturating of the	Internet Protocol Version 4 (TCP/IF	Pv4) Properties 🛛 🔋 🗙
Networking Sharing	General	
Connect using:		1
Intel(R) PR0/1000 MT Network Conne	You can get IP settings assigned auto this capability. Otherwise, you need t for the appropriate IP settings.	omatically if your network supports to ask your network administrator
This connection uses the following items:	O Obtain an IP address automatic	ally
🔲 🖳 Client for Microsoft Networks	💿 Use the following IP address	
🗹 📇 Network Load Balancing (NLB)	IP address:	192.168.0.116
RoS Packet Scheduler		
🗆 🛃 File and Printer Sharing for Microsof	S <u>u</u> bnet mask:	255 . 255 . 224 . 0
Internet Protocol Version 6 (TCP/IPv	Default gateway:	192 . 168 . 0 . 222
✓ Internet Protocol Version 4 (TCP/IPv		
Link-Layer Topology Discovery Map	C Obtain DNS server address auto	omatically
Eink-Layer Topology Discovery Hest		Idresses:
Install Uninstall		
- Description	Preferred DNS server:	10 . 9 . 99 . 71
Transmission Control Protocol/Internet Prot	<u>A</u> lternate DNS server:	10 . 9 . 99 . 72
across diverse interconnected networks.	Vaļidate settings upon exit	Ad <u>v</u> anced
0		OK Cancel

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

	🗼 Remote Desktop Services
	Component Services
	E Computer Management
	Data Sources (ODBC)
	Event Viewer
	💱 Internet Information Services (IIS) Manager
, Chan	😪 iSCSI Initiator
¥=	🚡 Local Security Policy
1	🧐 Network Load Balancing Manager
vm	N Performance Monitor
	🚡 Security Configuration Wizard
Documents	🚠 Server Manager
Computer	😿 Share and Storage Management
Network	🔄 Storage Explorer
nethork	System Configuration
Control Panel	Task Scheduler
	Windows Firewall with Advanced Security
Devices and Printers	Windows Memory Diagnostic
	Windows PowerShell Modules
Administrative Tools	Mindawa Conver Padava

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

💋 Network Load Balancing Manager		
File Cluster Host Options Help		
H. 응용 Network Load Balancing Clusters New Con	Cluster nect 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 cluster**. 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 participates

in the cluster.	In this	example the	VM only	has one	network adapter.
			,		

ew Cluster : Connect		
Connect to one host that is to	be part of the new cluster and	d select the cluster interface
Host: webde1.tulsa.sta	itsoft.com	C <u>o</u> nnect
Connection status		
Connected		
0011100100		
Interfaces available for config	uring a new cluster	
Interface name	Interface IP	
Local Area Connection 2	10.9.102.19	4
NLB Adapter	192.168.0.1	15
1		
	< Back Next>	Cancel Help
	<u>Tow</u>	

6. In the next dialog, keep the default settings.

IP address			Subnet mask	
192.168.0.115			255.255.224.0	
		<u>A</u> dd	Edit	Remove
nitial host state				
	Charles		-	

7. 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.

Add	l IP Address		×
	• Add IPv4 addre	ess:	
	IPv4 address:	192 . 168 . 0 . 117	
	Subnet mask:	255 . 255 . 224 . 0	
	C Add IPv6 addre	955;	
	IPv6 address:		
	C Generate IPv6	addresses	
	Link-local	Site-local 🔽 Global	

8. Configure the **Cluster parameters**.

<u>S</u> ubnet mask:	255 . 255 . 224 . 0	
<u>F</u> ull Internet name:	livescore.tulsa.statsoft.c	
IN <u>e</u> twork address:	U2-DF-CU-88-UU-75	
Cluster operation mode		
Unicast		
C <u>M</u> ulticast		
IGMP multicast		

- 9. The default option in **Cluster Operation Mode** is **Unicast**. This changes the network adapter MAC address so it is the same for all hosts in the cluster.
 - One network adapter is available on the server.
 - Two network adapters on each server.

Network Adapters on the Server

One network adapter is available on the server

The hosts participating in the cluster are not able to communicate with each other. In a Web Data Entry cluster, the hosts must 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 might 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 are 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, you can use standard **Multicast** with manual configuration of the switch hardware for the cluster IP so that only those ports receive the multicast traffic.

Two network adapters on each server

Leave option set to **Unicast**. As stated before, it is preferable to set up the NLB cluster with two 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 has the static cluster IPs assigned to it.
- The other adapter is 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&externalId=1006580
- 1. By default the port rules 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:



Note: You must set the Affinity option to None.

Add/Edit Port Rule
Cluster IP address
r v ⊾∐
Port range <u>F</u> rom: 80 To: 80 To:
Protocols
Filtering mode
Tim <u>e</u> out(in minutes): 0
© <u>S</u> ingle host
© Disable this port range
OK Cancel

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

decl	uster.tulsa.stats	oft.com	(192.16	8.0.117)	Properti	es		×	<
Clu	uster IP Addresses	Cluster	Paramete	rs Port f	Rules				
	efined port rules:				·				
	Cluster IP address	Start	End	Prot	Mode	Priority	Load	Affinity	
	All	80	80	TCP	Multiple			None	
L	•							•	
					Add	Edit		Remove	
				_					
	Port rule description	ן ייי							
	multiple members o	i to any (f the clu	cluster IP ster acco	address t rding to th	hat arrives ie load weig	on port 8L ght of eac) is baland h membei	ced across r.Client IP	
	addresses and por	is are us	ed to ass	ign client	connection	s to a spe	cific clust	er host.	
_					ПК	L Car		Help	1
					UK			11010	1

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

🧐 Netwo	rk Load Balaı	ncing Manage	r							-	
<u>File</u> <u>C</u> lus	ter H <u>o</u> st Og	tions <u>H</u> elp									
⊡ en	etwork Load Ba	lancing Clusters		Port rules configure	d on WEBDE1 (NLB.	Adapter)					
Ē- Ş	decluster.tuls	sa.statsoft.com	(192.168.0.11	Cluster IP address	Status	Start	End	Protocol	Mode	Priority	l Le
-	WEBDE1((NLB Adapter)		All	Enabled	80	80	TCP	Multiple		Ec
Log Entry	Date	Time	Cluster	Host	Description						
0012	4/11/2016	2:41:58 PM	192.168.0	. WEBDE2	End configuration c	hange					
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	poperation 3	.				
0015	4/11/2016	2:49:55 PM	192.168.0	. WEBDE1	Update 3 succeede	d [double click	.tor details]				
0016	4/11/2016	2:49:55 PM	192.168.0	WEBDE1	End configuration o	hange					
•											▶
											1.

Adding additional hosts to the cluster

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



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

ld Host to	Cluster : Cor	nnect			[
Connect t	o the host that	is to be added t	o the existing clu	ster	
<u>H</u> ost:	webde2				C <u>o</u> nnect
Connect	tion status				
Connec	ted				
Interfaces	available for c	onfiaurina the cl	luster		
Interface	e name		Interface If	P	
Local Ar	ea Connection		192.168.0,	.116	
1					

4. Leave the defaults in the Host Parameter dialog.

dd Host to Cluster : Ho	st Parameters	5				×
Priority (unique host iden	tifier): 2	▼				
Dedicated <u>IP</u> addresse	s					
IP address			Subne	et mask		
192.168.0.116			255.2	55.224.0		
		<u>A</u> dd		<u>E</u> dit	<u>R</u> emove	
Initial host state						
Default state:	Starte	ed	•			
Retain suspended	state after comp	outer restarts				
	< <u>B</u> ack	<u>N</u> ext >		Cancel	Help	

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

All	Start 8081	End 8081	<u> Prot</u> TCP	Mode Multiple	Priority 	Load Equal	Affinity None
•							Þ
				<u>A</u> dd	<u>E</u> dit		<u>R</u> emove
Port rule description TCP traffic directed equally across all m assign client conne	n 1 to any (nembers ections to	cluster IP of the clu o a specif	address I Ister.Clien ic cluster	that arrives t IP address host.	on port 80 ses and p)81 is bala orts are us	inced ied to
-		·					

6. After a short time, the new host is displayed as part of the cluster.

🧐 Networ	'k Load Balar	ncing Manager								_			
<u>File</u> <u>C</u> luste	er H <u>o</u> st O <u>p</u>	tions <u>H</u> elp											
🖃 🧝 Nel	twork Load Bal	ancing Clusters			Host configuration information for hosts in cluster livescore.tulsa.statsoft.com (192.168.0.217)								
ē 🞭	livescore.tuls	a.statsoft.com (192.168.0.217)		Host (Interface)	Status	Dedicated IP address	Dedicated IP subnet mask	Host priority	Initial host	state		
	WEBDE1(Local Area Conn	ection)		WEBDE1(Local Area Connec	. Converged	192.168.0.115	255.255.224.0	1	started			
	WEBDE2(Local Area Conn	iection)		WEBDE2(Local Area Connec	. Converged	192.168.0.116	255.255.224.0	2	started			
					[t]								
Log Entry	Date	Time	Cluster	Host	Description								
0005	5/2/2014	4:24:36 PM	192.168.0	WEB	DE1 Update 2 succeeded [double click for d	etails]						
0006	5/2/2014	4:24:36 PM	192.168.0	WEB	DE1 End configuration cha	nge							
0007	5/2/2014	4:27:28 PM	192.168.0	WEB	DE2 Begin configuration ch	ange							
0008	5/2/2014	4:27:29 PM	192.168.0	WEB	DE2 Waiting for pending op	peration 2							
0009	5/2/2014	4:28:35 PM	192.168.0	WEB	DE2 Update 2 succeeded [double click for d	etails]						
0010	5/2/2014	4:28:35 PM	192.168.0	WEBI	DE2 End configuration cha	nge					•		

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

Advanced TCP/IP Set	tings			? ×
IP Settings DNS	WINS			
TP addresses				_ [
		Cube at an adu		T
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	
De <u>f</u> ault gateways:				
Gateway		Metric		
192.168.0.222		Automatic		
	A <u>d</u> d	Edi <u>t</u>	Re <u>m</u> ove	
Automatic metr	ic			
Interface metric:				
		ОК	Can	cel

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 might 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 also need the new cluster MAC address. Open a command prompt and type ipconfig /all to acquire the new MAC address.

Uploading Spreadsheets to Statistica Data Entry

To easily upload data to Statistica Data Entry, users with Data Entry permissions can upload spreadsheets (.sta files only) to Data Entry via the "Import Data" option in the top menu:

Spotfire Statistica				
Data Entry Menu				
Create New Sample	View Sample Records	Edit Sample Data	Approve Sample Data	Import Data

The user will be prompted through a web form to prepare their spreadsheet for upload.

Import Data	
Data Entry Setup:	Select
Download Template	
Upload file	
Choose File No file chosen Upload	
Variable Matching	
Auto Match Manual Add	
Sample Identification	
Use this variable: None	
Parent Sample (only for DES sequense)	
Use this variable: None	
Options	
Complete sample	
Approve sample	
Import Data Reset	

The web form can also be used to edit existing samples (if the user has the permissions to do so) and blind data entry.

Option	Definition
Download Template	Creates a spreadsheet with the same variable constraints and headers as the selected Data Entry Setup (DES). Downloading the template makes it easier to enable variable matching.
	Once the template has been downloaded, add additional samples by adding new Cases to the spreadsheet.
	Note: Hidden/Calculated fields will be excluded in the spreadsheet template.
Upload File	Select the file to upload. The form accepts Statistica Spreadsheets (.sta file) only. File sizes up to 50 MB are accepted, and can be customized by editing the web.config file. See below for an example:
	<lpre><location path="DataImport.aspx"> <system.web> <!-- 50MB in kilobytes--></system.web></location></lpre>
Variable Matching	 Assign columns from the .sta file to the DES columns. Auto Matching will match variables in DES and Spreadsheet automatically by name.
	 When "Auto Match" is unclicked, the system will try to match the variables implicitly.

Option	Definition
	 When "Auto Match" is clicked, the system will show the variable matching list in editable form. Users are then able to edit/remove/add variable mapping as needed.
	• Manual Matching is for cases where the DES and Spreadsheet have 2 different variable lists.
	 If a manual mapping is created, "Auto Match" is not affected. The system only uses the final manual mapping list.
Sample Identification	 There are three conditions to help assign your data to certain samples: Sample_ID (if specified): To edit existing samples, obtain the Sample ID from the existing sample and ensure this ID is represented on a column of your spreadsheet.
	 The Spreadsheet's Marked Points: for adding new samples in case its DES has characteristics with non constant sample size. Sample size: for adding new samples in case its DES contains all
	characteristics with constant sample size.
Parent Sample	This is used in DES Sequences. Assign a parent sample to the uploaded sample.
Complete Sample	Mark samples as completed while importing your data. Completing a sample will require a comment.
	Note: If the Complete On Save option is enabled, then a comment will also be required during the import.
Approve Sample	Mark samples as approved while importing your data. Approving a sample will require a comment. Uploading Spreadsheets only to approve samples is not currently supported.
Import Data	Selecting this option will attempt to upload the spreadsheet data to Data Entry. Once the upload has completed, a table with the results of the upload are displayed:

Option	Definition
	 When the upload is successful, the results appear: All samples have been successfully uploaded.
	• When the upload is partially successful, the results appear: Samples have been partially imported.
	 The Miscellaneous column displays more detail about the error for troubleshooting.
	 When the upload is unsuccessful, the results displays: All samples were failed to import.
	 The Miscellaneous column displays more detail about the error for troubleshooting.

Email Notifications:

To receive e-mail notifications of data imported in Data Entry, administrators must add the following key-value to their web.config file: <add key="ImportRecipients" value="xxx@xxx.com"/>

Capturing Uploads in the Audit Log

All actions resulting from an upload via the **Import Data** form will be label with **Data Import** in the **Miscellaneous** column.

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

For more information, see the System Options, IIS section.

How to enable tracing?

To enable tracing, uncomment trace -->

```
<trace enabled="true" pageOutput="false" requestLimit="50"
localOnly="false" writeToDiagnosticsTrace="true" />
```

</system.web>

<!-- To enable tracing, uncomment system.diagnostics and sepcify the valid file name with write permission to the directory -->

<system.diagnostics>

<trace autoflush="true">

<listeners>

```
<add name="TextWriterListener"
type="System.Diagnostics.TextWriterTraceListener"
initializeData="C:\temp\dataentry_output.log" />
```

</listeners>

</trace>

</system.diagnostics>

<system.codedom>

<compilers>

```
<compiler language="VB" extension=".vb" compilerOptions="/d:Trace=true"
type="Microsoft.VisualBasic.VBCodeProvider, System, Version=1.0.5000.0,
Culture=neutral, PublicKeyToken=b77a5c561934e089" />
```

</compilers>

</system.codedom>

The system.webServer section is required for running ASP.NET AJAX under Internet.

Information Services 7.0. It is not necessary for previous version of IIS.

Spotfire Documentation and Support Services

For information about this product, you can read the documentation, contact Spotfire Support, and join Spotfire Community.

How to Access Spotfire Documentation

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The Product Documentation website is updated frequently and is more current than any other documentation included with the product.

Product-Specific Documentation

The documentation for this product is available on Spotfire Statistica[®] Product Documentation page.

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You can contact the Support team in the following ways:

- To access the Support Knowledge Base and getting personalized content about products you are interested in, visit our product Support website.
- To create a Support case, you must have a valid maintenance or support contract with a Cloud Software Group entity. You also need a username and password to log in to the product Support website. If you do not have a username, you can request one by clicking **Register** on the website.

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extensions, adapters, solution accelerators, and tools that extend and enable customers to gain full value from Spotfire products. In addition, users can submit and vote on feature requests from within the Spotfire Ideas Portal. For a free registration, go to Spotfire Community.

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