

# Kofax Communication Server

## EasyConfig Technical Manual

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The KOFAX logo is rendered in a bold, blue, sans-serif typeface. The letters are thick and closely spaced, with a consistent weight throughout the word.

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## Chapter 1

# Preface

KCS EasyConfig is a tool designed to simplify installation, deployment, and configuration of Kofax Communication Server (KCS).

The classic installation of KCS is still supported; in fact, many of the more complex installations still require the classic, interactive approach. However, some of the most important use cases of KCS are already covered by EasyConfig.

## Supported KCS Components

Currently, the following KCS components can be deployed using EasyConfig:

- TCOSS
- Document Converter
- TC/LINK-FI
- TC/LINK-SC
- KCS Fax over IP v3
- Line Server (LS1)
- KCS Backup

In addition, the following applications are installed:

- License Maintenance Tool
- MAKETCOSS (WConfig)
- Line Server Diagnostics Tool
- KCS Monitor (TCMon)
- TCPMeter Tool
- TC15 Tool
- LS1 Com Trace Tool

## Advantages

- Single user interface for configuring various KCS components

Many of the most common use cases with KCS can now be configured from a single configuration user interface. Previously used tools, such as WConfig, Windows Registry Editor, or FoIP Configuration Utility can still be used.

- Simple configuration of multiple link instances  
Without EasyConfig, installing multiple instances of links requires manual editing of a configuration file and the installer has to be started once for each link instance. With EasyConfig, creating another instance is much easier!
- Automatic installation without user interaction.

## Overview

Installation via EasyConfig behaves differently to previous KCS installations.

**This high-level procedure describes the general installation procedure.**

1. Install KCS via EasySetup.exe. All KCS components supported by EasyConfig are installed in an unattended mode.
2. Start EasyConfig tool from the Start menu.
3. Select which KCS components do you want to use.
4. Configure the selected components.
5. Save and deploy the configuration.
6. Use License Maintenance Tool to configure your licenses.
7. Start (or restart) the affected KCS processes to apply the changes.

## Chapter 2

# Installation

This chapter describes how to install KCS using the EasyConfig tool.

## Prerequisites

EasyConfig requires Microsoft .NET Framework 3.5 SP1 or higher.

The EasyConfig tool is supported on the same operating systems as Kofax Communication Server. Please refer to the *Environment Guide - Platform System Manual* for details.

With EasyConfig, the supported link and server components of Kofax Communication Server are installed. Refer to chapter [Supported KCS Components](#).

Please refer to the manuals of the particular KCS components for more information on required software and hardware.

**Note** Do not install EasyConfig and Kofax Capture on the same computer.

## Installing EasyConfig

Kofax Communication Server offers a new mode of installation: the EasyConfig silent setup mode. In the silent mode, no KCS configuration windows appear.

### To install KCS with EasyConfig:

1. Browse to your Kofax Communication Server installation disk.
2. Start EasySetup.exe. Alternatively, start Setup.exe /e.
3. Setup asks if you want to proceed with silent installation. Click **OK** to proceed with setup. Clicking **Cancel** stops the setup.
4. Wait until Kofax Communication Server is installed.
5. The computer must be restarted after the installation. Click **OK** to do this immediately; or click **Cancel** to restart your computer later.

A setup log file is generated automatically: C:\KCSSetup.log.

## Logging

The EasyConfig tool saves trace information to the directory CommonAppData\Kofax\KCS\EC\Log.

You can configure trace options by editing the file log4net.config in the directory CommonAppData\Kofax\KCS\EC\LogConfig. For more traces, change the level value from the default "INFO" to "DEBUG".



## Chapter 3

# Configuration Data

This chapter describes how the EasyConfig tool deals with the configuration data.

## Managed Versus Non-Managed Configuration Parameters

There are many different physical configuration parameters of a KCS system located in the Windows registry, KCS Core (TCOSS) configuration files, diverse INI files, and so on.

EasyConfig tool provides an abstraction layer by defining a subset of *logical* configuration parameters that map correspondingly to their “*EC-managed*” physical counterparts. Those physical parameters that are not explicitly assigned to any logical parameters are referred to as *non EC-managed*. They are created and set to proper default values during the EasyConfig setup.

EC configuration of the KCS system is stored in the `C:\ProgramData\Kofax\KCS\EC\Configurations` directory, with two subdirectories:

- **Current** – Contains the latest EC configuration which is being loaded during the EC tool startup.
- **Deployed** – Contains all configurations which have ever been deployed to the physical KCS system saved in separate subdirectories.

After starting EasyConfig, the current configuration can be modified and saved back to the Current sub-directory. After it has been deployed to the physical KCS system, new sub-directory (such as “13-01-2011\_13.23.02.0861”) is created in the Deployed directory and all files from the Current are copied there.

Any changes of physical configuration parameters using the traditional tools such as registry editor, WConfig are possible, but the following rules apply:

- If any non-managed parameters have been modified on the physical KCS system, subsequent deployment of the configuration by the EC tool does not modify their values (and it is not possible to detect such a configuration change in the EC tool).
- If any of the EC-managed parameters were changed on the physical KCS system, subsequent deployment of the configuration by the EC tool overwrites their values. It is possible to detect such a configuration change in EasyConfig (Tools > Integrity Check). This function compares the last deployed EC configuration (in the Deployed directory) with EC-managed parameters on the physical KCS system.

## Configuration Files

EasyConfig uses following configuration files:

- ecConfig.xml  
The configuration of the particular KCS system
- diverse xml schema files (\*.xsd)  
Configuration parameter definition and mapping among the logical higher level parameters and their physical counterparts (registry, TAMCONF values).
- diverse xslt files (\*.xsl)  
XSLT transformations being used to generate and control the GUI views and configuration upgrades.

The relationship between logical and physical parameters is documented in the file `easyconfig_parameters.htm` (part of KCS documentation).

## Chapter 4

# Configuration

This chapter describes how to use the EasyConfig tool to configure Kofax Communication Server applications.

## Configuration with EasyConfig

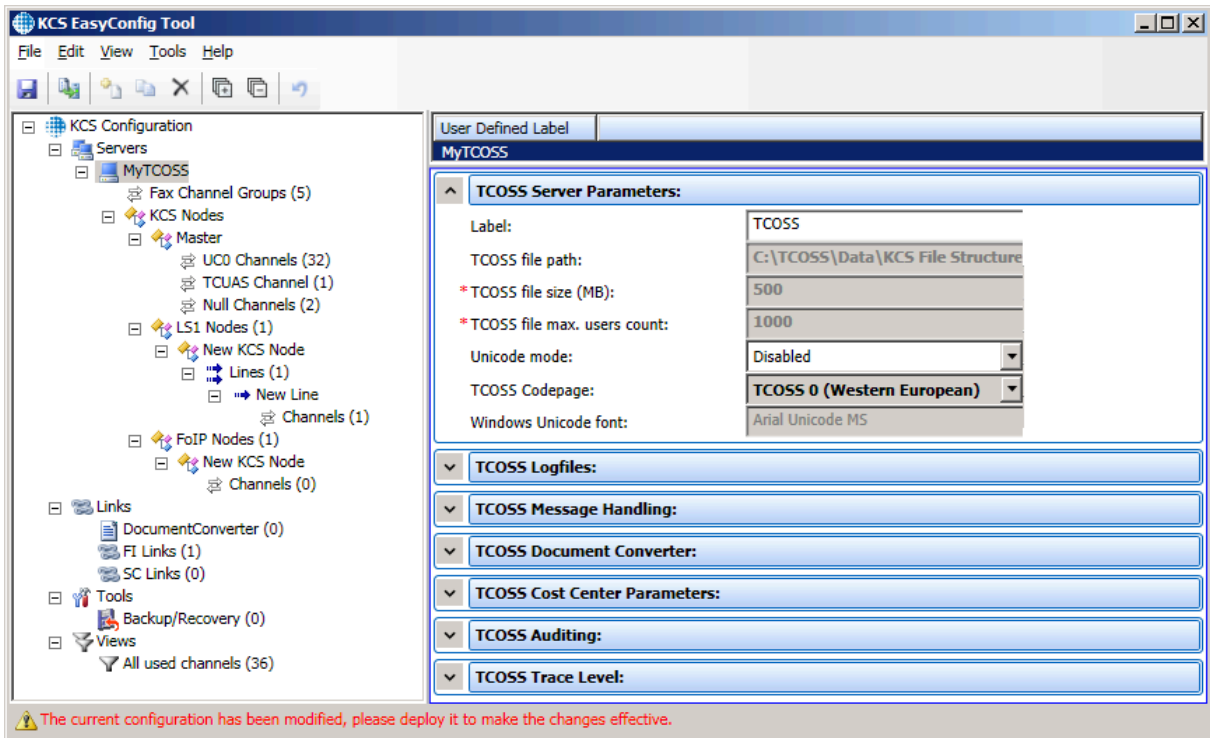
Launch EasyConfig by selecting **Start > Programs > Kofax Communication Server > KCS EasyConfig Tool**.

The following optional command line parameters are supported:

```
Ec.exe [-configuration <path>] [-noupdate] [-help]
```

Parameter	Description	Defaults
-configuration <path>	specify a directory where EasyConfig should load the configuration	C:\ProgramData\Kofax\KCS\EC\Configurations
-noupdate	do not check for new schema versions	New schema versions are checked
-help	show a message box with available command line arguments	None

The EasyConfig user interface looks like the following.













The EasyConfig user interface has five main parts:

- Menu and toolbar are the main controls, located in the top part of the window.
- Component tree: KCS components configurable by EasyConfig are listed in a tree view in the left part of the window.
- Item list: In the top right part of the window lists the existing items in the currently selected category of the component tree
- Configuration panel: This panel in the bottom right part of the window displays the parameters of the currently selected entry in the item list.
- Status bar at the bottom of the page shows important hints.

**Tip** Hover the mouse pointer over various user interface elements or parameters to display tooltips.

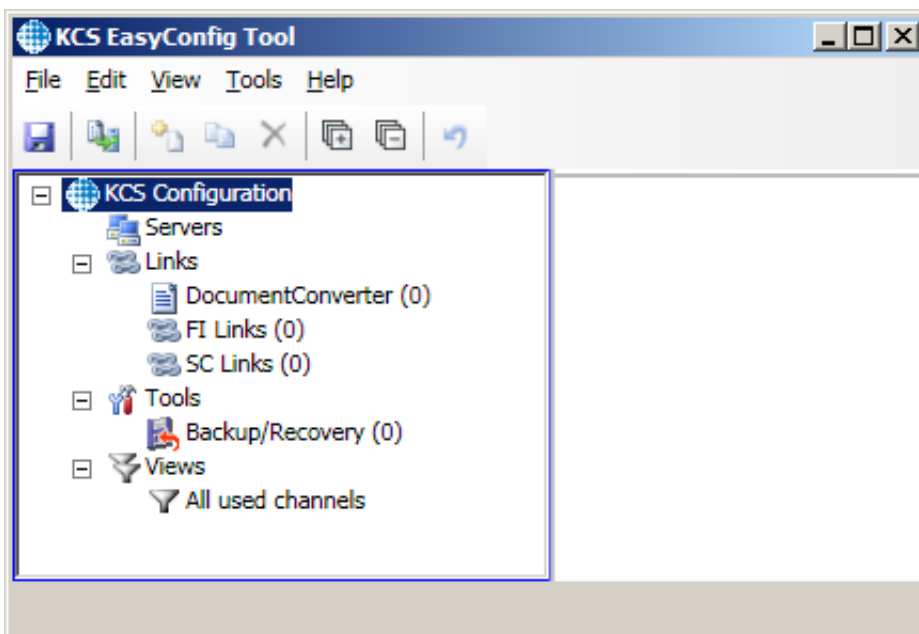
**These are some of the actions you can perform:**

1. Select an item in the component tree. The item can be a TCOSS server, a channel, a link type, node type, etc.
2. Optionally, you can use the collapse all  / expand all  buttons from the toolbar (or select the option from the View menu), or the collapse  / expand  buttons in the component tree to navigate to the item you need.

3. Do one of the following:
  - Click **Add**  (or select **Edit > Add**; or use context menu commands) to add a new empty item to the component tree. Usually, you need to provide some parameters in the configuration panel. For server channels only, you can use Add multiple command in the context menu to add multiple channels at once.
  - Click **Clone**  (or select **Edit > Clone**) to create a copy of the selected item. You might want to edit some parameters in the configuration panel.
  - Click **Delete**  (or select **Edit > Delete**) to delete the selected item.
  - Click **Undo**  to undo.
4. Then, click **Save**  (or select **File > Save**) to confirm the newly added item and save the configuration changes to the internal XML file.
5. Select **Tools > Integrity Check** to verify whether any EC-managed parameters were modified outside the EC tool on the physical KCS system.
6. Click **Deploy**  (or select **File > Deploy**) to apply the changes. See chapter *Deployment via EasyConfig* for details.

## The Component Tree

Even before adding any modules/items to the configuration, the component tree contains container placeholders for all modules that are supported by current EC tool version:



The numbers in the parenthesis denote the number of items/modules configured within particular container. For example, FI Links (0) shows there are no TC/LINK-FI instances in the current configuration.

**Note** The Servers container does not have any number in parenthesis, as it is possible to add only a single KCS Core server instance there.

The container “Views” offers a read-only access – it contains some views on the current configuration, but does not allow adding any items/modules.

To start configuring the system, follow the steps described in the topic [Configuration with EasyConfig](#) to add or delete items/modules.

## The Configuration Panel

You can change the parameter values of the selected item/module in the configuration panel.

When you add new items, EC tool proposes most suitable default values for the most of parameters and denotes those which are recommended to be explicitly changed with the red asterisk \* in front of parameter’s description.

Label:	New Link
* Link Instance Name:	TCLINKFI
* Link Group:	TCLINKFI

Each module has a “Label” parameter. Use it to assign a descriptive name for that module, such as “TC/Link-FI Instance 1”.

Certain modules have a few crucial parameters that can be configured only once, immediately after being created such as the TCOSS file path.

<b>TCOSS Server Parameters:</b>	
Label:	New Server
TCOSS file path:	C:\TCOSS\Data\KCS File Structure.tcss

After saving the configuration change, these parameters become grey; it is not possible to change them any more (the only way to change them is to delete the corresponding module in the tree or item list view).

<b>TCOSS Server Parameters:</b>	
Label:	TCOSS Production
TCOSS file path:	C:\TCOSS\Data\KCS File Structure

If any of the displayed parameters have been modified, the only allowed actions are Save and Undo; the rest of the commands in the toolbar are deactivated.

## Parameter Input Validation

Most configuration parameters are validated against pre-defined rules after each keystroke. This helps to identify invalid values immediately. For example, the IP address field below is red because the string “10.0.0.” entered so far is not a valid IP address.

Common Parameter:	
Label:	New KCS Node
Node name:	L.2
IP address:	10.0.0.
Port number:	5000
Password:	•••••

IP address of Lanlink node  
The 'IPAddress' element is invalid - The value '10.0.0.' is invalid according to its datatype 'IPAddress\_T' - The Pattern constraint failed.

Adding the last missing digit solves the problem.

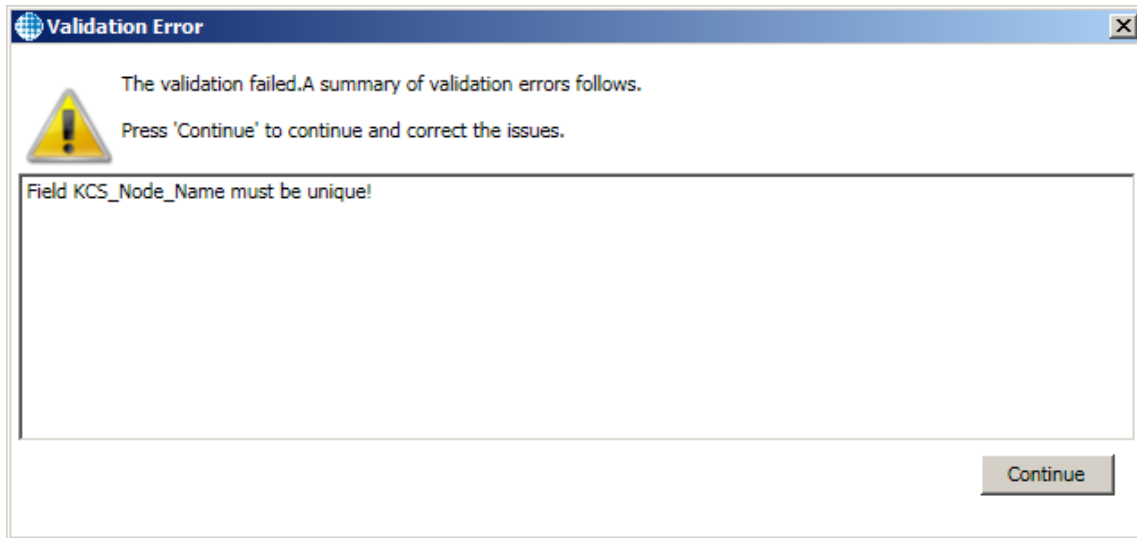
Common Parameter:	
Label:	New KCS Node
Node name:	L.2
IP address:	10.0.0.1
Port number:	5000
Password:	•••••

As long as any of the parameter input fields is marked as invalid (red color), it is not possible to save this configuration change.

Furthermore, there are situations where a parameter appears valid during editing, but its value cannot be saved into the configuration due to some further requirements, such as its uniqueness. For example, assume there is already one KCS node “L.1” in the configuration and we attempt to add another one with the same name.

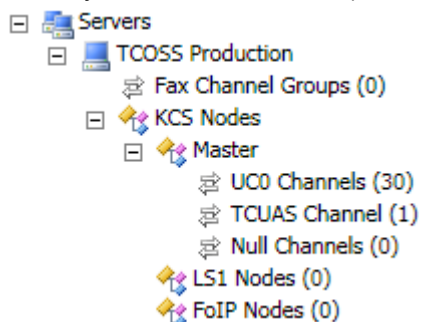
Common Parameter:	
Label:	New KCS Node
Node name:	L.1
IP address:	10.0.0.2
Port number:	5000
Password:	•••••

When you click **Save**, an error message box informs that the node name must be unique.



## Configuring TCOSS Channels and Channel Groups

When you add a new server ("TCOSS"), following items are added to the component tree:



The server configuration consists of:

- Common server parameters: You can select the TCOSS component in the tree and change parameters in configuration panel.

**Note** If the TCOSS file structure already exists, it is not modified during deployment and the settings in EasyConfig are ignored. This is to prevent unwanted loss of information. To use new values, you have to delete the existing file structure or select a different name/path.

- Master, LS1 and FoIP nodes: This is where you can add communication channels.
  - UC0 Client-Server (channel type CS), TCUAS and Null channels on the master node.
  - Fax channels on the LS1 or FoIP node.



- Fax channel groups: Use them to configure fax related parameters for fax channels.

**Note** The channels themselves do not have any configuration data. To configure particular fax parameters (such as the fax header line), create a corresponding fax group and assign it to a number of fax channels that should share this configuration. See [Use Case: FoIP and LS1 Channels](#) for details.

## TCOSS File Structure Partitioning

In a classic, interactive installation, the TCOSS file structure has many configuration options. With EasyConfig, there are only the following parameters:

- File size
- Maximum count of users
- Unicode mode
- TCOSS codepage
- Windows Unicode font

For other file structure variables, either the default values are used, or they are calculated automatically from the provided parameters. The following guidelines apply:

- Number of reserved directory entries: one per 16 KB data block, max. 16 million.
- Number of used directory entries: 25% of reserved directory entries, min. 30 000.
- Tech area: fixed size (1200 entries, 25600 kB)
- User area:
  - Two entries per user, max. 25% of remaining (total - Tech) entries
  - 128 kB per user, max. 25% of remaining (total - Tech) data space
- Mail area: remaining entries (total - Tech - User), remaining disk space

Kofax Communication Server automatically calculates the suitable values for user entries, address book entries, mail entries, and size of log file (short-term archive). Refer to *TCOSS Configuration Manual* (Sysconf line 13).

## TCOSS Channel Number Allocation

TCOSS channels are traditionally being assigned the TCOSS channel number expressed in terms of two-character code, with valid ranges 00 ..99, A0 ..A9, B0 ..B9, ..., Z0 ..Z9, 0A ..0Z, 1A ..1Z, ..., 9A ..9Z, AA ..AZ, BA ..BZ, ..., OA ..OZ. Unlike the WConfig tool, EC does not allow you to explicitly assign TCOSS channel number to a particular channel.

Instead, the following TCOSS channel code allocation scheme is being used:

- All master channels are automatically configured in the bottom up manner starting with the lowest unallocated channel code (OZ, OY, OX, ...). The only exception is the pre-configured TCUAS channel, which is assigned the TCOSS channel number 00.

- Fax channels are assigned in the top down way, starting with the first unallocated channel code, such as 01, 02, 03, ...

Fax channels configured for a particular FoIP node and particular LS1 node/line combination must occupy the contiguous TCOSS channel number range (TCOSS restriction). That is why if configuring any lower channel count than the maximum supported for a particular node/line combination, the EC tool allocates the maximum possible channel count, which makes it easy to add additional channels later for a particular line.

Maximum fax channel count per node/line combination.

Node/Line	Max. channel count
FoIP/-	60
LS1/ISDN BRI	2
LS1/ISDN PRI E1	30
LS1/ISDN PRI T1	23
LS1/analog	1

To illustrate this concept, use the “All used channels” view to display the list of all allocated TCOSS channels configured on the KCS server.

## Example 1 – Pre-configured channels after creating the new server item

Note that there is one TCUAS channel with TCOSS channel code 00 assigned, and 30 client-server channels assigned channel codes NW- OZ.

Number ▲	Channel Group	Type	Channel Label
00		A0	TCUAS Channel
NW		CS	UC0 Channel
NX		CS	UC0 Channel
NY		CS	UC0 Channel
NZ		CS	UC0 Channel
OA		CS	UC0 Channel
OB		CS	UC0 Channel
OC		CS	UC0 Channel
OD		CS	UC0 Channel
OE		CS	UC0 Channel
OF		CS	UC0 Channel
OG		CS	UC0 Channel
OH		CS	UC0 Channel
OI		CS	UC0 Channel
OJ		CS	UC0 Channel
OK		CS	UC0 Channel
OL		CS	UC0 Channel
OM		CS	UC0 Channel
ON		CS	UC0 Channel
OO		CS	UC0 Channel
OP		CS	UC0 Channel
OQ		CS	UC0 Channel
OR		CS	UC0 Channel
OS		CS	UC0 Channel
OT		CS	UC0 Channel
OU		CS	UC0 Channel
OV		CS	UC0 Channel
OW		CS	UC0 Channel
OX		CS	UC0 Channel
OY		CS	UC0 Channel
OZ		CS	UC0 Channel

## Example 2 – Add two ISDN PRI lines with 8 channels each

Take the default configuration from Example 1 as the basis and configure two LS1 nodes each with one ISDN PRI E1 line with 8 channels.

**Note** The first line has been assigned 8 channel codes 01-08 (but internally the range 09-30 has been allocated for future channel extension on this line).

That is why the second line has been assigned 8 channel codes 31-38 but again the range 38-60 has been reserved internally.)

Number ▲	Channel Group	Type	Channel Label	Group Label	Node	Node Long Name	Line Name	Slot	
00		A0	TCUAS Channel						
01	F	IF	8 E1 channels	ISDNfaxGroup	L.1	New KCS Node	New Line	S0A	
02	F	IF	8 E1 channels	ISDNfaxGroup	L.1	New KCS Node	New Line	S0A	
03	F	IF	8 E1 channels	ISDNfaxGroup	L.1	New KCS Node	New Line	S0A	
04	F	IF	8 E1 channels	ISDNfaxGroup	L.1	New KCS Node	New Line	S0A	
05	F	IF	8 E1 channels	ISDNfaxGroup	L.1	New KCS Node	New Line	S0A	
06	F	IF	8 E1 channels	ISDNfaxGroup	L.1	New KCS Node	New Line	S0A	
07	F	IF	8 E1 channels	ISDNfaxGroup	L.1	New KCS Node	New Line	S0A	
08	F	IF	8 E1 channels	ISDNfaxGroup	L.1	New KCS Node	New Line	S0A	
31	F	IF	8 E1 channels	ISDNfaxGroup	L.2	New KCS Node	New Line	S0A	
32	F	IF	8 E1 channels	ISDNfaxGroup	L.2	New KCS Node	New Line	S0A	
33	F	IF	8 E1 channels	ISDNfaxGroup	L.2	New KCS Node	New Line	S0A	
34	F	IF	8 E1 channels	ISDNfaxGroup	L.2	New KCS Node	New Line	S0A	
35	F	IF	8 E1 channels	ISDNfaxGroup	L.2	New KCS Node	New Line	S0A	
36	F	IF	8 E1 channels	ISDNfaxGroup	L.2	New KCS Node	New Line	S0A	
37	F	IF	8 E1 channels	ISDNfaxGroup	L.2	New KCS Node	New Line	S0A	
38	F	IF	8 E1 channels	ISDNfaxGroup	L.2	New KCS Node	New Line	S0A	
NW		CS	UC0 Channel						
NX		CS	UC0 Channel						
NY		CS	UC0 Channel						
NZ		CS	UC0 Channel						
OA		CS	UC0 Channel						
OB		CS	UC0 Channel						
OC		CS	UC0 Channel						
OD		CS	UC0 Channel						
OE		CS	UC0 Channel						
OF		CS	UC0 Channel						
OG		CS	UC0 Channel						
OH		CS	UC0 Channel						
OI		CS	UC0 Channel						
OJ		CS	UC0 Channel						

## Example 3 – Add 8 channels to first ISDN PRI E1 line:

Take the configuration from Example 2 above as the basis and 8 channels to the first ISDN PRI E1 line.

**Note** These 8 channels were added to the channel codes 09-16, and the channel codes of the other channels were not changed at all.


Number ▲	Channel Group	Type	Channel Label	Group Label	Node	Node Long Name	Line Name	Slot
00		A0	TCUAS Channel					
01	F	IF	8 E1 channels	ISDNfaxGroup	L.1	New KCS Node	New Line	S0A
02	F	IF	8 E1 channels	ISDNfaxGroup	L.1	New KCS Node	New Line	S0A
03	F	IF	8 E1 channels	ISDNfaxGroup	L.1	New KCS Node	New Line	S0A
04	F	IF	8 E1 channels	ISDNfaxGroup	L.1	New KCS Node	New Line	S0A
05	F	IF	8 E1 channels	ISDNfaxGroup	L.1	New KCS Node	New Line	S0A
06	F	IF	8 E1 channels	ISDNfaxGroup	L.1	New KCS Node	New Line	S0A
07	F	IF	8 E1 channels	ISDNfaxGroup	L.1	New KCS Node	New Line	S0A
08	F	IF	8 E1 channels	ISDNfaxGroup	L.1	New KCS Node	New Line	S0A
09	F	IF	add 8 channels	ISDNfaxGroup	L.1	New KCS Node	New Line	S0A
10	F	IF	add 8 channels	ISDNfaxGroup	L.1	New KCS Node	New Line	S0A
11	F	IF	add 8 channels	ISDNfaxGroup	L.1	New KCS Node	New Line	S0A
12	F	IF	add 8 channels	ISDNfaxGroup	L.1	New KCS Node	New Line	S0A
13	F	IF	add 8 channels	ISDNfaxGroup	L.1	New KCS Node	New Line	S0A
14	F	IF	add 8 channels	ISDNfaxGroup	L.1	New KCS Node	New Line	S0A
15	F	IF	add 8 channels	ISDNfaxGroup	L.1	New KCS Node	New Line	S0A
16	F	IF	add 8 channels	ISDNfaxGroup	L.1	New KCS Node	New Line	S0A
31	F	IF	8 E1 channels	ISDNfaxGroup	L.2	New KCS Node	New Line	S0A
32	F	IF	8 E1 channels	ISDNfaxGroup	L.2	New KCS Node	New Line	S0A
33	F	IF	8 E1 channels	ISDNfaxGroup	L.2	New KCS Node	New Line	S0A
34	F	IF	8 E1 channels	ISDNfaxGroup	L.2	New KCS Node	New Line	S0A
35	F	IF	8 E1 channels	ISDNfaxGroup	L.2	New KCS Node	New Line	S0A
36	F	IF	8 E1 channels	ISDNfaxGroup	L.2	New KCS Node	New Line	S0A
37	F	IF	8 E1 channels	ISDNfaxGroup	L.2	New KCS Node	New Line	S0A
38	F	IF	8 E1 channels	ISDNfaxGroup	L.2	New KCS Node	New Line	S0A
NW		CS	UC0 Channel					
NX		CS	UC0 Channel					

## Chapter 5

# Deployment via EasyConfig

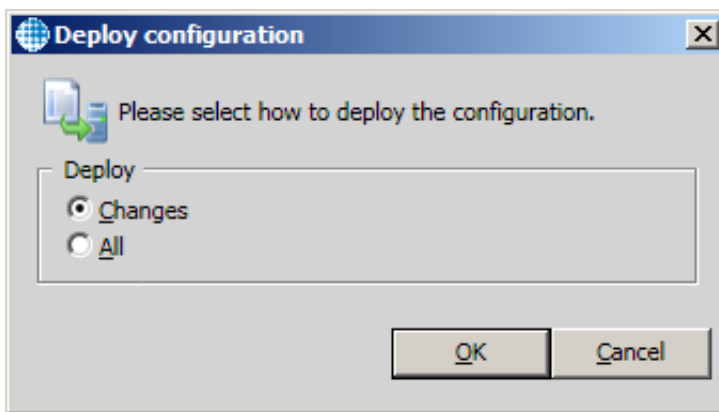
This chapter describes how to use EasyConfig to deploy the configuration to the KCS system.

If there are any configuration changes that have not yet been deployed, this is indicated in the status bar.

 The current configuration has been modified, please deploy it to make the changes effective.

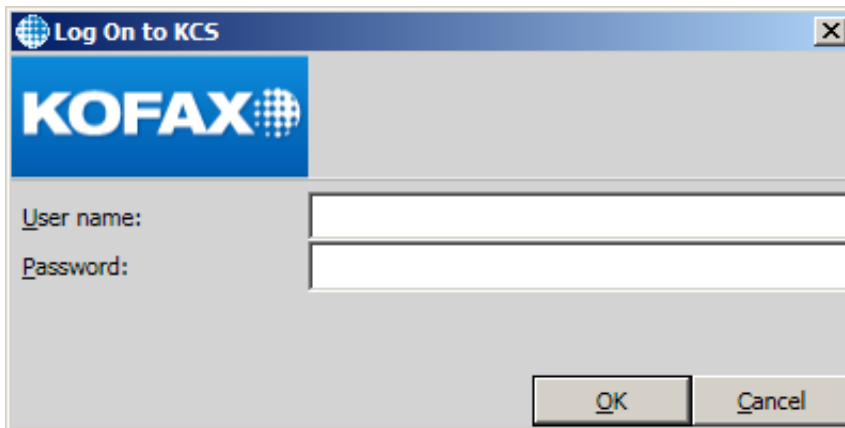
To deploy a configuration:

1. Click **Deploy** .



2. Select how to deploy the configuration:
  - Select **All** if you want to deploy the whole configuration including modules whose configuration was not changed. Use All if this is the first deployment of a new KCS system. Also, use **All** if some physical KCS parameters have been modified with classic tools (e.g., regedit) and you want to overwrite these changes.
  - Select **Changes** if you want to deploys only modules with modified configuration. This is the default option recommended for most configuration changes.

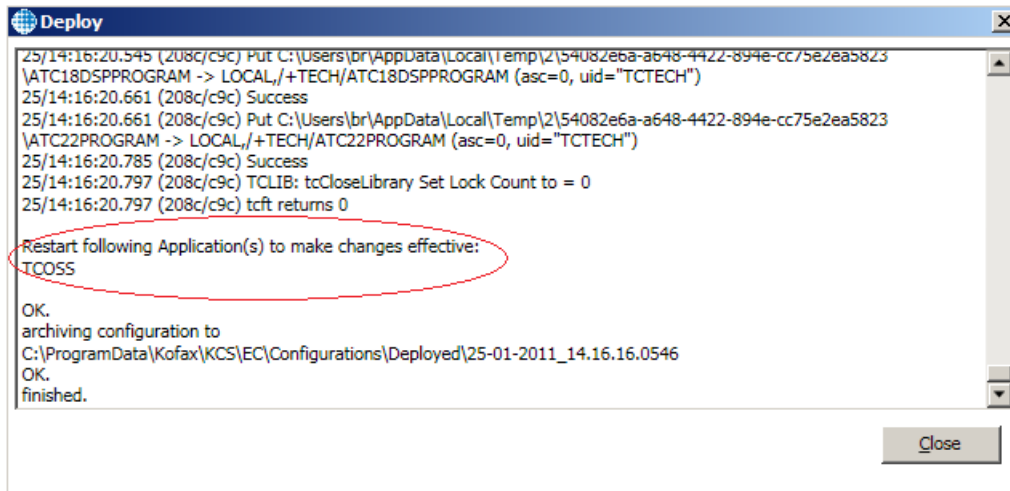
3. Click **OK**. One of the following happens:
  - If the TCOSS server is not running, the EasyConfig deploys the configuration directly to the TCOSS file structure (TFS) without prompting for the user credentials.
  - If the TCOSS server is already running, you need to log in. Tech user rights are required (by default: "TCTECH", "TCTECH").



EasyConfig deploys the changes.

4. Look at the deployment log for further instructions.

The log displayed by EasyConfig lists recommended actions that need to be performed to make the changes effective. Usually it is necessary to restart / reload some components.



**Note** There may be situations where no application restarts are necessary as the configuration changes activate automatically!

## Chapter 6



# Use Cases

This section describes use cases.



## Use Case: Basic TCOSS and TC/LINK-FI


In this sample use case, we describe how to deploy TCOSS and a single instance of TC/LINK-FI. Make sure your computer meets the prerequisites necessary to run TCOSS and TC/LINK-FI.

### To install TCOSS and TC/LINK-FI:

1. Install KCS as described in section [Installing EasyConfig](#).
2. Start the EasyConfig tool by selecting **Start > All Programs > Kofax Communication Server > KCS EasyConfig Tool**.
3. Configure a new TCOSS server:
  - a. In the component list, select **Servers**.
  - b. Click **Add**  to add a new TCOSS server.
  - c. In the configuration panel, type a descriptive label for your TCOSS server.
  - d. In the configuration panel, type the size of your TCOSS file structure.
  - e. In the configuration panel, modify any other parameters if necessary.
  - f. Click **Save** . The new server is added and the complete configuration is saved to the XML file. The status bar shows this message:

Current configuration has been modified, please deploy it to make changes effective.





4. Configure a new TC/LINK-FI:
  - a. In the component list, select **FI Links**.
  - b. Click **Add**  to add a new **TC/LINK-FI**.
  - c. In the configuration panel, type a descriptive label for your link.
  - d. In the configuration panel, provide KCS connection parameters.
  - e. In the configuration panel, modify any other parameters if necessary.
  - f. Click **Save**  .

5. Click **Deploy** . Select **All**. Click **OK**. The following things happen:
  - Configuration values are written to the Windows registry.
  - KCS file structure is created, formatted, and initialized.
  - TCOSS configuration is stored in the file structure.
6. Start TCSRVR using KCS Monitor (TCMon).
7. Use KCS License Maintenance Tool to apply the necessary licenses (or switch to Test Mode).


## Use Case: FoIP and/or LS1 Channels

In this sample use case, we describe how to configure fax channels for use with KCS Fax over IP v3 and Line Server. A working TCOSS deployed using EasyConfig is assumed (see [Use Case: Basic TCOSS and TC/LINK-FI](#)).




### To configure FoIP and/or LS1 Channels:

1. Start the EasyConfig tool by selecting **Start > All Programs > Kofax Communication Server > KCS EasyConfig Tool**.
2. Configure a new fax channel group (only if fax group not yet available):
  - a. In the component list, select **Fax Channel Groups**. Click **Add** .
  - b. In the configuration panel, type a descriptive label for your fax group.
  - c. In the configuration panel, choose proper fax channel type (ISDN, analog or FoIP).
  - d. In the configuration panel, choose country.  
This is especially important for analog groups as the country setting controls country-specific analog line parameters!
  - e. In the configuration panel, modify any other parameters if necessary.
  - f. Click **Save** .
3. Configure **FoIP** or **LS1 Node** (only if not yet available):
  - a. In the component list, select FoIP Nodes or LS1 Nodes. Click **Add** .
  - b. In the configuration panel, type a descriptive label for your node.
  - c. In the configuration panel, type a node name (L.1, L.2, ..., L.176).
  - d. In the configuration panel, type an IPV4 or IPV6 address of your node.
  - e. In the configuration panel, modify any other parameters if necessary.  
Note that for a local FoIP node, you can configure its Call Peer settings here instead of running the FoIP configuration utility afterwards.
  - f. Click **Save** .



4. Configure Lines on LS1 Node (only if not yet available):
  - a. In the component list, select Lines under the corresponding LS1 node. Click **Add** .
  - b. In the configuration panel, type a descriptive label for this line.
  - c. In the configuration panel, choose proper LS1 slot (S0A, S0B, ...).
  - d. In the configuration panel, choose proper channel type (ISDN or analog).
  - e. In the configuration panel, modify any other parameters if necessary (especially ISDN protocol and access type in case of ISDN channel).


Note that with the analog channel type, all necessary analog line parameters are being set automatically based on the related fax group's country configuration.





5. Add channels on **FoIP** or **LS1 Node**:
  - a. In the component list, select Channels under the corresponding FoIP node or LS1 line.
  - b. Click **Add**  to add a single or **Add multiple** (context sensitive menu) to add multiple channels.
  - c. In the configuration panel, type a descriptive label for your channels.
  - d. In the configuration panel, choose proper fax group.
  - e. Click **Save** .
6. Click **Deploy**  and select Changes. The following things happen:
  - Configuration values are written to the TCOSS.
  - The instruction to reboot TCOSS is displayed in the deployment log.
7. Use **KCS License Maintenance Tool** to apply the necessary licenses (or switch to Test Mode).
8. Restart TCOSS to make the changes effective.

## Use Case: Configure Channel Sub-Groups on a Single PRI Line

In this sample use case, we describe how to configure two or more sub-groups of fax channels with different settings on the same PRI E1 or T1 line. Working TCOSS using EasyConfig is assumed. See chapter [Use Case: Basic TCOSS and TC/LINK-FI](#).

### To configure two channel sub-groups on one ISDN PRI line:

1. Start the EasyConfig tool by selecting **Start > All Programs > Kofax Communication Server > KCS EasyConfig Tool**.
2. Configure a new fax channel group for inbound faxes, labeled such as "FaxInbound" (refer to [Configuring TCOSS Channels and Channel Groups](#)):
  - a. In the component list, select **Fax Channel Groups**.
  - b. In the item list, select the **FaxInbound** group.
  - c. In the configuration panel, modify any of its parameters as desired (such as switch on fax reception in the Fax Reception panel).
  - d. Click **Save** .

3. Configure new fax channel group for outbound faxes, as labeled, such as “FaxOutbound”:
  - a. In the component list, select **Fax Channel Groups**.
  - b. In the item list, select the **FaxOutbound** group.
  - c. In the configuration panel, modify any parameters as desired (such as switching off fax reception in the Fax Reception panel).
  - d. Click **Save** .
4. Configure LS1 Node L.1 and add ISDN PRI E1 line on the slot S0A.
5. Add fax outbound channels on the LS1 Node L.1 Slot S0A:
  - a. In the component list, select **Channels** under the L.1 node and PRI line S0A.
  - b. Select **Add multiple** via a context-sensitive menu, type required number of channels (such as 15), type the channel label (such as “FaxOutbound”) and choose the channel group **FaxOutbound**.
  - c. Click **OK**.
  - d. Click **Save** .
6. Add fax inbound channels on the LS1 Node L.1 Slot S0A:
  - a. In the component list, select **Channels** under the L.1 node and PRI line S0A.
  - b. Select **Add multiple** via a context sensitive menu, type the required number of channels (such as 15), type a channel label (such as “FaxInbound”) and choose the channel group **FaxInbound**.
  - c. Click **OK**.
  - d. Click **Save** .
7. Click **Deploy**  and choose **Changes**. The following things happen:
  - Configuration values are written to the TCOSS.
  - The instruction to reboot L.1 node is displayed in the deployment log.
8. Use **KCS License Maintenance Tool** to apply the necessary licenses (or switch to Test Mode).
9. Reboot L.1 node via KCS Monitor.

## Use Case: Configure Modem Traces on Particular Fax Channel





In this sample use case, we describe how to configure modem traces on a single fax channel on PRI E1 or T1 line. Working TCOSS using EasyConfig with LS1 node L.1 with 30 fax channels is assumed. See chapter [Use Case: Configure Channel Sub-Groups on a Single PRI Line](#).

Assume we want to configure the modem traces on one of the fax outbound channels while keeping all other settings of this channel.

**To configure modem traces on a single or more fax channels on a ISDN PRI line:**

1. Start the EasyConfig tool by selecting **Start > All Programs > Kofax Communication Server > KCS EasyConfig Tool**.


2. Clone “FaxOutbound” to create a new fax channel group, such as “FaxOutboundTrace”:
  - a. In the component list, select **Fax Channel Groups**.
  - b. In the item list, select the **FaxOutbound** group.
  - c. Select **Clone** via the context menu.
  - d. In the configuration panel, type a descriptive label for your test fax group (such as “FaxOutboundTrace”).

When cloning, you can only modify parameters in expanded panels. The cloned item must be saved to make further changes.
  - e. Click **Save** .
3. Change trace settings of the new channel group:
  - a. In the item list, select **FaxOutboundTrace** group.
  - b. In the configuration panel, modify any of its parameters as desired (such as modem traces).
  - c. Click **Save** .
4. Assign the new fax channel group to chosen fax channel:
  - a. In the component list, select **Channels** under the L.1 node and PRI line S0A.
  - b. In the item list, select the chosen fax channel or even more of them (by pressing the CTRL + clicking the desired channel line).
  - c. In the configuration panel, select the **FaxOutboundTrace** group.
  - d. Click **Save** .
5. Click **Deploy**  and choose Changes. The following things happen:
  - Configuration values are written to the TCOSS.
  - The instruction to reboot L.1 node is displayed in the deployment log.
6. Reboot the L.1 node via KCS Monitor.


## Use Case: Clone TC/LINK-FI Link Instances

In this sample use case, we describe how to add additional link instances by cloning the already configured “parent” instance. Working TCOSS with one TC/LINK-FI instance using EasyConfig is assumed. See chapter [Use Case: Basic TCOSS and TC/LINK-FI](#).

**To Clone the Parent TC/LINK-FI Instance:**

1. Clone the TC/LINK-FI instance:
  - a. In the component list, select **FI Links**.
  - b. In the item list, select the parent TC/LINK-FI instance.
  - c. Select **Clone** via the context menu.
  - d. In the configuration panel, type a descriptive label for your link.
  - e. In the configuration panel, modify any other parameters in expanded panels as required.
  - f. Click **Save** .

**Note** Note that in the “Clone” mode, you can only modify parameters in expanded panels. The cloned item must be saved prior to making any changes.

2. Click **Deploy**  and choose **Changes**. The following things occur:
  - Configuration values are written to the Windows registry.
  - The instruction to reload supervisor process list is displayed in the deployment log.
3. Use KCS License Maintenance Tool to apply the necessary licenses (or switch to Test Mode).

## Chapter 7

# Compatibility with Interactive Setup, Registry Editor and WConfig

This section describes the compatibility with Interactive Setup, Registry Editor and WConfig.

## Installing Unsupported Applications

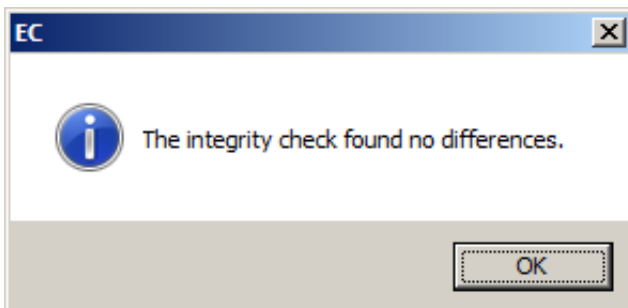
Currently, only a subset of KCS applications is managed by EasyConfig. These are listed in [Supported KCS Components](#).

You can use the classic, interactive setup to install other KCS applications and components. You must use the classic tools to configure them.

## Changing Non EasyConfig-Managed Configuration Parameters

Currently, only a subset of configuration parameters is managed by EasyConfig. You can modify other values as necessary, which do not affect your EasyConfig configuration. Furthermore, any changes of non EasyConfig-managed parameters by classic tools are preserved during any subsequent EasyConfig configuration deployment.

**Note** If you changed any of the non EasyConfig-managed parameters on the KCS server (per registry editor, WConfig) the EasyConfig tool's integrity check function (**Tools > Integrity Check**) will not find any configuration inconsistency.



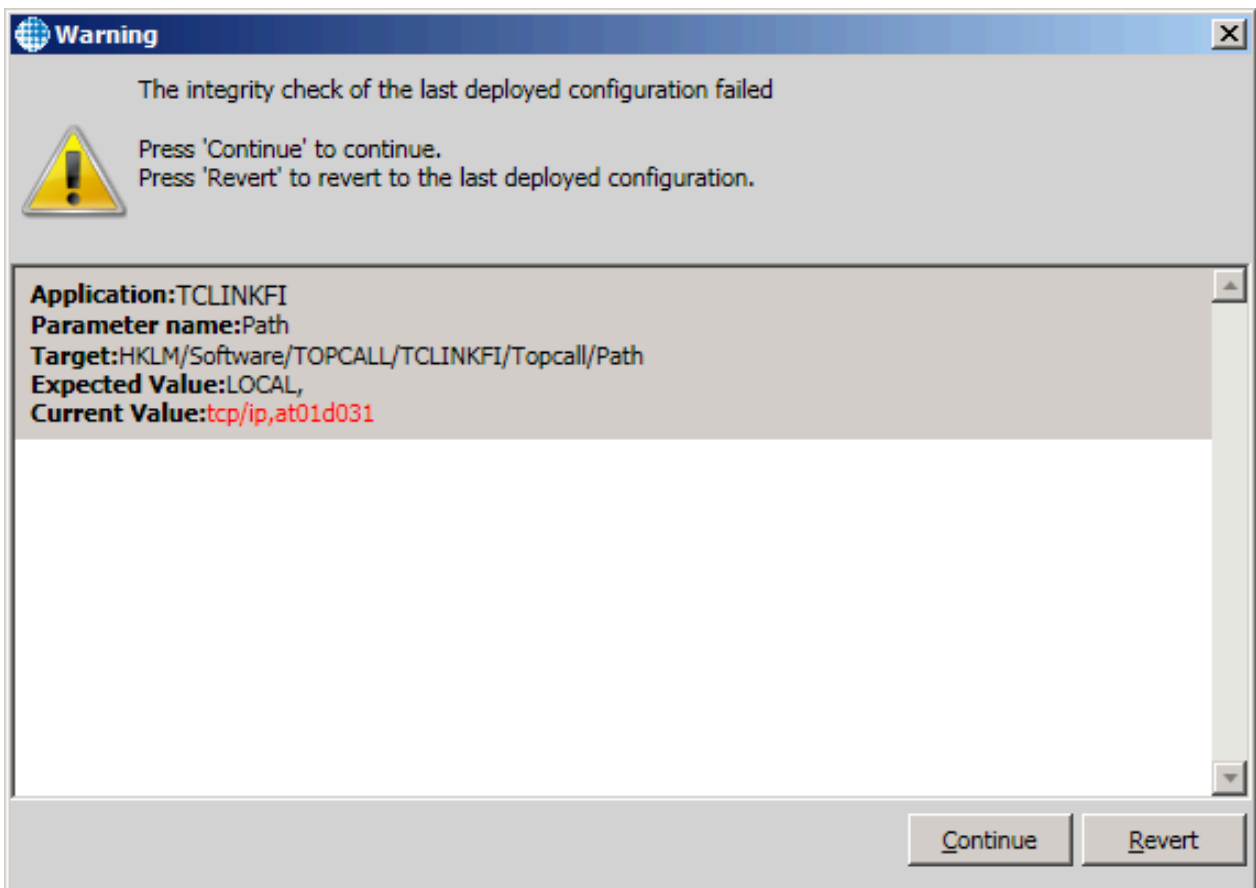
## Changing EasyConfig-Managed Configuration Parameters

You can also modify EasyConfig-managed parameters with the classic tools on the KCS server, but these changes will be not preserved during any subsequent EasyConfig configuration deployment.

If any changes with the classic tools have been done on the KCS server prior to the EasyConfig configuration deployment, it is a good idea to at first double-check whether any EasyConfig-managed parameters had been changed by using the EasyConfig tool's integrity check function (**Tools > Integrity Check**).

In the case any differences would have been found, the list of differences would be displayed with two options:

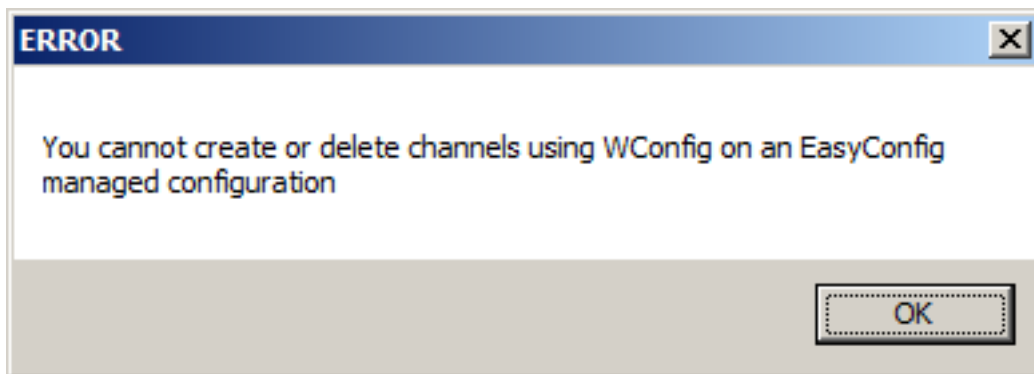
- Continue to leave the configuration unchanged.
- Revert to overwrite the KCS server configuration deployed the last time by the EasyConfig tool.



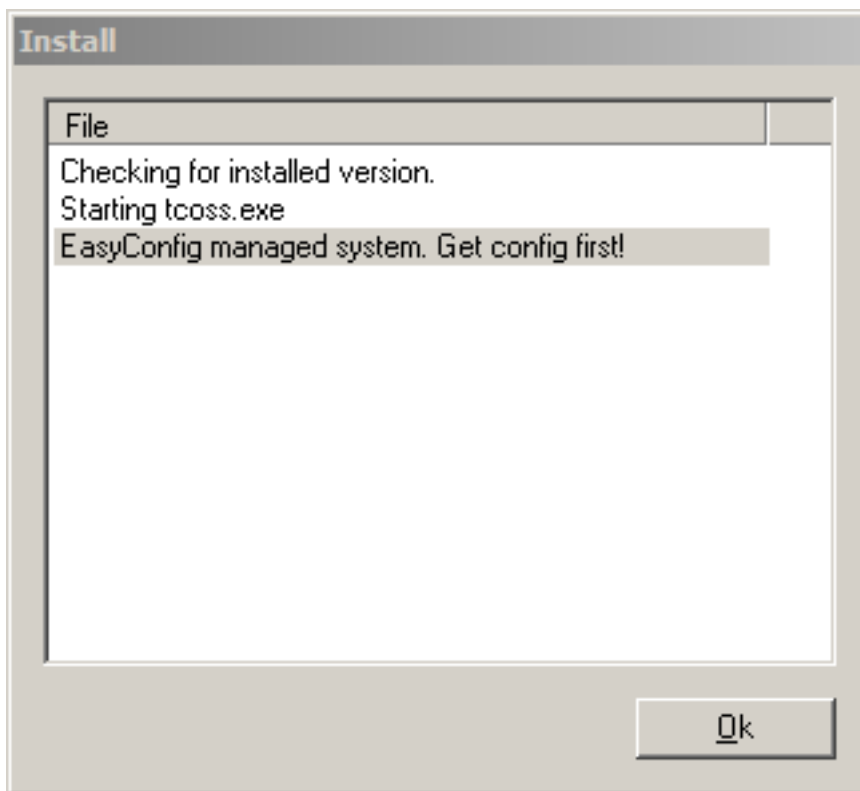
## WConfig Compatibility

It is possible to load the EC-managed TCROSS configuration to the WConfig (by using the get configuration command). You can see in the caption of the WConfig window that the TCROSS is managed by EasyConfig.

You can use WConfig to change any of the parameters in the system configuration or in any of already configured channels. However, it is not possible to add or delete any of the configured channels. The following error message is displayed.



Furthermore, it is not possible to create a new TCROSS configuration with WConfig and install it to a TCROSS running an EC-managed configuration. The following error message is displayed.



The information that the TCOSS configuration is EC-managed is stored in the Sysconf file (line 10 position 1). See the *TCOSS Configuration Manual* for details.

It is possible to change an EasyConfig managed configuration into a WConfig-managed. This change is permanent; returning to EasyConfig is not supported.

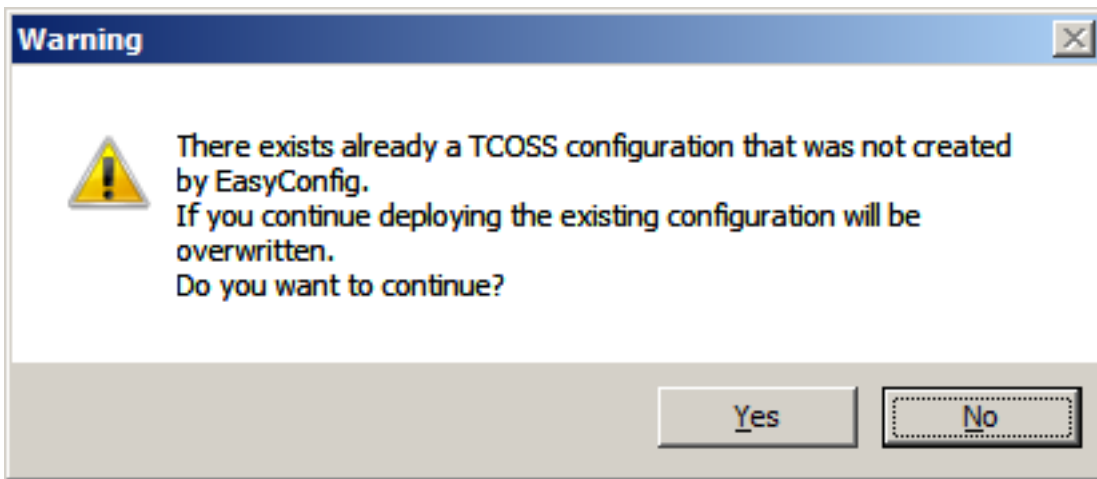
**To permanently migrate to WConfig:**

1. An EasyConfig-managed TCOSS must be running. TCfW Communication Server Client (part of KCS Client Applications) must be connected to the server.
2. Log in to TCOSS as a tech user (system folder write access required).
3. In the System folder, open the file **ASYSCONFCCCC**.
4. In line 10, change the first character from "1" to "0".
5. Save the file and close **TCfW**.
6. Start **WConfig**.
7. Enter the path to the new TCOSS configuration.
8. Select **Get configuration via net**. Ignore all warnings.  
Your TCOSS is now configurable solely via WConfig.



## Conflict with Standard Setup

When you try to configure a KCS system with EasyConfig on a computer where KCS components had been installed before using standard KCS setup, this inconsistency is detected by the EasyConfig tool. The following warning is displayed before deploying.



Click **Yes** to proceed with the deployment.

Click **No** to stop the deployment.

## Chapter 8

# Hints and Restrictions

This chapter lists hints and restrictions.

- No upgrade of classic systems.  
EasyConfig cannot be used to import configuration from existing KCS systems. It can only be used for new installations.
- Support for a subset of KCS functions.

Only a subset of Kofax Communication Server functions listed in chapter can be managed by EasyConfig. However, you can use the classic tools (interactive setup, registry editor, WConfig) to add other features.

- Parameters managed by EasyConfig must not be changed by other tools (registry editor, TCfW, WConfig). EasyConfig is able to detect such changes.
- EasyConfig nodes limitation  
EasyConfig supports a maximum of 58 KCS nodes (FoIP/LS1).  
EasyConfig supports a maximum of 16 FoIP nodes.
- Validation error when EasyConfig starts

In rare cases, it may happen that the current configuration becomes corrupt, EasyConfig displays a validation error and shuts down. In that case, delete the content of the current directory (refer to [Managed Versus Non-Managed Configuration Parameters](#)). Then, copy the last deployed configuration into the current folder.

- If you are using KCS Monitor (TCMon) to clone TC/LINK-SC instances, you must identify the KCS server with server name or IP address (but not with “localhost” or “.”). Refer to the *TC/LINK-SC Manual* for details.

**Note** You can use EasyConfig to clone link instances to avoid this problem.