




Deltek

Deltek Touch for Maconomy®

Admin Guide

February 21, 2025



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Overview

The Deltek Touch for Maconomy application is the best way for on-the-go Deltek Maconomy users to not only submit and track time, expenses, and mileage, but also approve time, expenses, vendor invoices, purchase orders, and even draft client invoices. Even when you are away from the office, immediate mobile device access means Deltek Touch keeps you informed and in control.

The Touch Admin Guide contains information on how to install and upgrade Deltek Touch and set up multitenancy in the application. This guide is updated as new features are added or removed, but some functionalities or details may be documented in separate guides.

Note: The official name of the application is *Deltek Touch for Maconomy*. This document only uses it at first mention. The succeeding instances of the application name display *Deltek Touch*. In addition, the application name in the Apple App Store and Google Play Store is *Deltek Touch for Maconomy*.

How This Document is Organized

This document is organized so that you can go quickly to the section you need. Use CTRL+F to easily find the term you are searching for or see the table below to find the section to help you.

Section	Description	Purpose of This Section
Installation	Includes tasks you need to perform to complete the app installation and configuration	<ul style="list-style-type: none">▪ Details installation prerequisites and technical considerations▪ Summarizes release updates to the Touch app, installer, and web service▪ Instructions on downloading Deltek products from DSM▪ Installation instructions on Linux and Windows servers▪ Provides Touch authentication setup instructions
Upgrade	Includes steps you need to take to upgrade to the latest Touch system	<ul style="list-style-type: none">▪ Prerequisites and procedures to upgrade Touch▪ Frequently asked questions when upgrading Touch
Multitenancy Setup	Includes instructions on how to set up a multitenant Touch server	<ul style="list-style-type: none">▪ Steps to install a multitenant Touch server▪ Details multitenant Touch server upgrade instructions

Revision History

A summary of recent changes in this document is listed in the following table:

Update	Version	Description
Added Touch 4.4 changes	4.4	Updated several sections to reflect changes to the app version as well as other supported and desupported versions.
Parameters and Descriptions	4.4	Added a note to the row for the UNIQUE_HISTORY setting, which is no longer applicable.
Added Touch 4.3 changes	4.3	Updated several sections to include changes about the app version and related enhancements.
Changes for OEL installations	4.3	Updated installation steps for OEL, to include a new PHP version (8.0.30).
Changes to Azure, Okta, and OneLogin	4.2	Added new reply URL for Azure, Okta, and OneLogin.
Added Touch 4.2 changes	4.2	Updated several sections to include changes about the app version and related enhancements.
Removed Windows Server 2012	4.2	Removed content related to Windows Server 2012.
Added Touch 4.1.3 changes	4.1.3	Updated several sections to include changes about the app version and related enhancements
configuration.ini	4.1.3	Added the REST_USESF parameter
Removed OEL 7	4.1.3	Removed content related to OEL 7
Removed RHEL	4.1.3	Removed content related to RHEL
Removed Google Analytics content	4.1.1	Removed Appendix C: Google Analytics
Added Touch 4.1 changes	4.1	Updated several sections to include changes about the app version and related enhancements
Windows Server 2012	4.1	Added instructions on how to install Deltek Touch on Windows Server 2012
Messages REST API	4.1	Added new rewrite rules for messages endpoint
configuration.ini	4.1	Added a new field in the configuration.ini
Update Touch Customizations	4.1	Added details about layout changes when upgrading from Maconomy 2.6

Update	Version	Description
Appendix B: Touch Server URL in Email	4.1	Updated instructions for sending the Touch server URL to users via email
Supported & Desupported Versions	4.0	Added a new table that summarizes supported and desupported versions for a current release
Windows Sever 2019 or 2022	4.0	Added instructions on how to install Deltek Touch on Windows Server 2019 or 2022
Removed MScript-related information	4.0	All MScript-related content were removed in relation to the MScript Touch API removal.
Server Side Configuration Settings	4.0	Moved to the Deltek Touch for Maconomy Layout Configuration Guide as the updated Settings Configuration section
Rewrite Rules	4.0	Included steps on how to add rules to the Maconomy-API and UnencodedURLRule for a specific client when setting up the proxy server
configuration.ini	4.0	System parameters were added, changed, and removed according to the MScript Touch API removal.
Guides & Resources	4.0	Updated the list of Maconomy documentation references
Restructured documents and streamlined content	4.0	The Deltek Touch Installation, Upgrade, and Multitenancy Setup Guides were combined into the Touch Admin Guide to serve as the primary document for technical consultants. In addition, outdated materials were removed from the document and overall content was restructured. See How This Document is Organized for details.

INSTALLATION

Installation Overview

This section outlines release changes to the Deltek Touch installer, web service, and app.

Supported & Desupported Versions

The following table lists all the versions that Deltek Touch supports and desupports for the current release.

Supported Versions		Newly Supported	Newly Desupported
Maconomy	<ul style="list-style-type: none"> Maconomy 2.5 (or later) Maconomy 2.6 (or later) 	<ul style="list-style-type: none"> Maconomy 2.6.4 Maconomy 2.6.5 	<ul style="list-style-type: none"> None
Touch Backend	<ul style="list-style-type: none"> Touch Backend 3.4 Touch Backend 3.5 Touch Backend 3.6 Touch Backend 3.7 Touch Backend 3.8 Touch Backend 4.0 Touch Backend 4.1 Touch Backend 4.2 Touch Backend 4.3 Touch Backend 4.4 	<ul style="list-style-type: none"> Touch Backend 4.4 	<ul style="list-style-type: none"> None
Mobile Operating Systems	<ul style="list-style-type: none"> Android <ul style="list-style-type: none"> 12 (or later) 13 (or later) 14 (or later) 15 (or later) Apple iOS <ul style="list-style-type: none"> 17.0 (or later) 18.0 (or later) 	<ul style="list-style-type: none"> Android <ul style="list-style-type: none"> 15 Apple iOS <ul style="list-style-type: none"> 18.0 	<ul style="list-style-type: none"> Android <ul style="list-style-type: none"> 11 Apple iOS <ul style="list-style-type: none"> 16.0
Windows Server	<ul style="list-style-type: none"> Windows Server 2016 Windows Server 2019 Windows Server 2022 	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> None
OEL	<ul style="list-style-type: none"> OEL 8 	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> None

What's New

Touch Installer

The following updates are made to the Touch 4.4 installer:

- The Touch installer now installs PHP 8.3.14 for Windows, which contains several new security updates.

Note: *This only applies to initial installation or if Touch previously installed the PHP version.*

If PHP has already been installed on the Touch server and it was not installed by the Touch installer, the Touch installer does not overwrite the existing installation as it may break existing installed products. Deltek strongly recommends that you install on a Touch server without PHP. In addition, Deltek makes every effort to update to the most recent version of PHP in every release.

- The UNIQUE_HISTORY setting is no longer applicable.

Touch App

- Deltek Touch for Maconomy version 4.4 for Android and iOS are now available for download from *Google Play* and *Apple Store*, respectively.

Note: Deltek recommends that you use Touch backend 4.4 to access all the functionalities. To check if your version is still supported, tap **Settings » About** in the app.

The app will run in fully compatible mode only if you have Maconomy 2.6.4 or 2.6.5. On all other Maconomy versions, the app will run in partially compatible mode.

Although the Touch app is still available for users on the following Maconomy versions, Deltek no longer guarantees that the app can run against these versions:

- Starting with Touch 3.5, Maconomy X1 and 2.1 are no longer supported.
- Starting with Touch 3.6, Maconomy 2.2 and 2.3 are no longer supported.
- Starting with Touch 4.0, Maconomy 2.4 is no longer supported.

If you are on these Maconomy versions, Deltek recommends that you do not upgrade the app.

Web App

The following updates are made to the Touch web app:

- If you open the Touch URL in a browser, you will no longer be allowed to use a PIN to log in. Instead, you will need to enter your credentials each time you want to log in.

Prerequisites

Before you begin the installation of Deltek Touch, it is important to understand the information in this section.

Technical Considerations

The following requirements must be met to run Deltek Touch:

- Deltek Touch can be run only on 2.5 (or later), and 2.6 (or later).
- Deltek Touch can be installed on Windows and Oracle Enterprise Linux (OEL).
- Deltek Touch runs on IIS or Apache for Windows, and Apache for OEL.

Environment	Prerequisites
Windows + IIS	<ul style="list-style-type: none"> ▪ Deltek Touch requires IIS to be installed on a server that runs Windows Server 2016, 2019, or 2022. ▪ Deltek Touch requires PHP 8.3.14 or later to be installed on Windows. The Touch server installer installs the required PHP version.
Windows + Apache	<ul style="list-style-type: none"> ▪ You must install Apache on a server that runs Windows Server 2016, 2019, or 2022. ▪ Deltek Touch requires PHP 8.3.14 or later to be installed on Windows. The Touch server installer installs the required PHP version.
Linux + Apache	<ul style="list-style-type: none"> ▪ Deltek Touch supports Oracle Linux 8.0. ▪ Deltek Touch only supports Apache 2.4 on Oracle Linux 8.0. ▪ Deltek Touch requires PHP to be installed. On Oracle Linux 8.0, Deltek Touch requires PHP 8.0.30.

- Deltek Touch is based on Maconomy dialogs. Therefore, Maconomy must be set up correctly with regards to functionality and dialog access. See [Maconomy Dialog Access](#).
- Deltek Touch supports Single Sign-On (log in using domain credentials) using Kerberos on both Apache and IIS web server.
- Deltek Touch supports SSO with OneLogin, Okta, and Windows Azure Active Directory (WAAD).
- Deltek Touch supports applications from the *Apple App Store* and *Google Play*. If you are using an unsupported version of Maconomy (compatibility mode), you may be able to use the native browser of your device to enter your organization's Deltek Touch for Maconomy URL.

Note: The Deltek Touch URL has the format <https://<server>/deltektouch/maconomy/time>, where **<server>** refers to the host name of your Touch Server.

- Microsoft IIS 10 that comes with Windows Server 2019 or 2022 has HTTP/2 enabled by default. If this causes problems in Touch, Deltek recommends that you disable HTTP/2 in IIS 10 to avoid any issues.

Prerequisites

Note: To disable HTTP/2:

1. Start the registry editor (regedit).
2. Go to **HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\HTTP\Parameters**.
3. In the Parameters folder, add the following two new DWORD (32-bit) values: EnableHttp2Tls and EnableHttp2Cleartext.
4. Ensure both new values have been set to 0 (disabled).
5. Restart your machine.

- **Before you run the Touch Installer, make sure that you have *Microsoft Visual C++ Redistributable for Visual Studio* installed on the server.** This is needed for PHP to work correctly.

On Windows Server 2019, you need Microsoft Visual C++ Redistributable for Visual Studio 2015-2019 x64 and x86. Whereas, on Windows Server 2022, you need Microsoft Visual C++ Redistributable for Visual Studio 2015-2022 x64 and x86. This should be available by default.

Name	Publisher	Installed On	Size	Version
CrowdStrike Windows Sensor	CrowdStrike, Inc.	6/1/2022	73.5 MB	6.38.15205
IIS URL Rewrite Module 2	Microsoft Corporation	3/10/2022	4.24 MB	7.2.1993
Ivanti Notifications Manager	Ivanti	1/25/2022	314 KB	11.0.4.1159
Microsoft Application Request Routing 3.0	Microsoft Corporation	3/16/2022	3.29 MB	3.0.05311
Microsoft Edge	Microsoft Corporation	6/17/2022	102.0.1245	
Microsoft Visual C++ 2012 Redistributable (x64) - 11.0.60610	Microsoft Corporation	3/7/2022	20.5 MB	11.0.60610
Microsoft Visual C++ 2012 Redistributable (x86) - 11.0.60610	Microsoft Corporation	3/7/2022	17.3 MB	11.0.60610
Microsoft Visual C++ 2015-2022 Redistributable (x64) - 14.32.31326	Microsoft Corporation	5/21/2022	20.2 MB	14.32.31326
Microsoft Visual C++ 2015-2022 Redistributable (x86) - 14.32.31326	Microsoft Corporation	5/21/2022	17.6 MB	14.32.31326
Microsoft Web Deploy 2.0	Microsoft Corporation	3/10/2022	13.2 MB	2.0.1070
Microsoft Web Platform Installer 3.0	Microsoft Corporation	3/10/2022	9.28 MB	3.0.5
VMware Tools	VMware, Inc.	3/24/2022	128 MB	11.3.5.1855

Compatibility Mode Definitions

Compatibility Mode	Description
Fully Compatible	You must be on Touch Android application, iOS application, web application, Touch Server, and API. All features and functions in the application are available to you.
Partially Compatible	You must be on Touch Android application, iOS application, web application, Touch Server, and API. All features and functions in the application are available to you.
Incompatible	There are some combinations of API and Touch server that make it impossible to even use the browser version to run the application.

Compatibility Mode	Description
	<p>In case of incompatibility, Deltek Touch displays two messages. The first one informs you about the incompatibility that it detects. Clicking OK on the incompatibility message displays the debug message, which contains additional information about the environment and is meant only for troubleshooting. After you click OK on the debug message, you cannot use the native application anymore.</p> <div style="border: 1px solid #0070C0; padding: 10px; margin: 10px 0;"> <p>Note: You could also encounter the debug message when using the browser version of Deltek Touch, but this is a very rare situation. It happens if the network communication fails during login because the application is retrieving the Touch server version from the configuration.ini file. If the Touch server version is not retrieved, the incompatible and debug messages display.</p> </div> <p>The debug message displays when one of the following scenarios occur:</p> <ul style="list-style-type: none"> ▪ The minimum Touch server version defined in Deltek Touch is greater than the version in the Deltek Touch server. For example: <ul style="list-style-type: none"> ▪ App Minimum Touch Server Version: 1.0.3.0 ▪ Deltek Touch Server: 1.0.2.0 ▪ The maximum Touch server version defined in Deltek Touch is earlier than the version set in Deltek Touch server. For example: <ul style="list-style-type: none"> ▪ App Maximum Touch Server Version: 1.3.1.0 ▪ Deltek Touch Server: 1.3.2.0 ▪ If there is no Touch server version defined on the Deltek Touch server or Deltek Touch cannot retrieve the current Touch server version. ▪ If there is no product version retrieved by the client-side. ▪ If the product version is not supported by the client-side. ▪ If the API version is not supported by the client-side.

Feature Matrix

Feature	Touch App Version	4.4	
	Maconomy Version	2.5	2.6
Weekly Time Registration		•	⊕
Daily Time Registration		•	⊕
Expense Registration		•	⊕
Mileage Registration		•	⊕

Prerequisites

Feature	Touch App Version	4.4	
	Maconomy Version	2.5	2.6
Approvals (Time, Expense, Purchase Order, Vendor Invoice, Draft Invoice)		•	⊕
Requires Approval Hierarchies		•	⊕
Quotes Approval		⊕	⊕
Rejected Time Flow		•	⊕
Approval by Employee Type		•	⊕
Possibility to Use Remarks on Favorites		•	⊕
Layout Configuration (see the Deltek Touch for Maconomy Layout Configuration Guide)		•	⊕
Server-Side Configuration Options (see the Settings Configuration section in the Deltek Touch for Maconomy Layout Configuration Guide)		•	⊕
Unicode Support		•	⊕
Support for RESTful Web Services (from 2.2.4 and 2.3 GA)		•	⊕
Auto-Completion of Domain Name		•	⊕
Password Management: Change, Reset, Expired and Blocked Password		⊕	⊕
Expense Justification		⊕	⊕
Support for SSO with Microsoft Azure		•	⊕
Registering Time in Days		⊕	⊕
Support for Check In/Out Entries Multiple Times Per Day		⊕	⊕
Approving Time in Days		•	⊕
Support for Login to Touch Using Maconomy Credentials in an SSO Environment		•	⊕
Purchase Order Fields Available in Timesheet and Expense Sheet for Subcontractor		⊕	⊕
Notifications for Rejected Expenses and Mileage		⊕	⊕
Purchase Orders		⊕	⊕

Prerequisites

Feature	Touch App Version	4.4	
	Maconomy Version	2.5	2.6
Absence Management		⊕	⊕
Enhanced PIN Security		•	⊕
Timesheet Tracking Post Submission		⊕	⊕
Enhanced Usage Tracking		•	⊕
Favorites Only on Find Job Screen		•	⊕
Automatic Receipt Name for Attachment on Expense Sheet		•	⊕
Absence in Hours		⊕	⊕
Enhanced Look and Feel		•	⊕
Add Tax Code and Tax, Currency to Expense Sheet Line		•	⊕
Biometrics Login		•	⊕
Block User in Touch		⊕	⊕
Support for Option List Based Fields in REST Layouts		⊕	⊕
Mandatory Attribute in Layouts		⊕	⊕
Option to Hide Maconomy Login for SSO Users		•	⊕
Support Information on About Screen		•	⊕
Support for Option List in Expense Justification		⊕	⊕
Invoice Allocation Lines for Approval for G/L Accounts		•	⊕
Support for Long Text Fields		⊕	⊕
Substitute Approval		•	⊕
Maconomy 2FA		⊕	⊕
Map Feature on the Expense Sheet Line Screen		⊕	⊕
Attaching Receipts Using Quick Capture		⊕	⊕
OneLogin Support		⊕	⊕

Prerequisites

Feature	Touch App Version	4.4	
	Maconomy Version	2.5	2.6
Transfer Calculated Distance in Google Maps to Touch		⊕	⊕
Secure Storage Plugin Update		•	⊕
Timesheet Check In		⊕	⊕
Support for Quote Approval		⊕	⊕
New URLs for Downloading Touch for Android and iOS		•	⊕
Security: Binary Stripping		•	⊕
Security: Stored Cross-site Scripting in MScript (Expense/Mileage)		•	⊕
SIEM Application Level/UI Logging in Touch		•	⊕
Advanced User Settings Control		•	⊕
Improved Touch Icons for Apple and Android		•	⊕
Application Performance Monitor in REST		⊕	⊕
SSL Certificate Check Capability		•	⊕
Enhanced Approval Workflow		⊕	⊕
Support for Okta Authentication		⊕	⊕
Overtime Control in Timesheets		⊕	⊕
Improved Touch Icons for Apple and Android		•	⊕
Android Face ID Authentication		•	⊕
Pull Down to Refresh Timesheets		•	⊕
Default Keyboard Setting in Lowercase for Logins		•	⊕
Customizable Search Screens in REST		⊕	⊕
Improved Popup Field Values		⊕	⊕
Expense Entry Automation with ICR		⊕	⊕
Enhanced Reloading of Timesheet Data		⊕	⊕

Prerequisites

Feature	Touch App Version	4.4	
	Maconomy Version	2.5	2.6
Color Coded Time Balances		⊕	⊕
Improved Loading Spinner on Login		⊕	⊕
Pull-to-Refresh List Screens		⊕	⊕
Missing Receipt Error in Archives		⊕	⊕
Minor Expenses UI Enhancements		⊕	⊕
Quick Capture with ICR Enhancements		⊕	⊕
Customizable Actions in REST		⊕	⊕
Updated Calendar Widget in Daily Timesheets		•	⊕
Access Token for 2FA Enrollment		⊕	⊕
Detaching Receipts from Expenses		⊕	⊕
Customizing Receipt Image and PDF Settings		⊕	⊕
Enhanced Filter and Search Performance		⊕	⊕
Support for Load Balancing		⊕	⊕
Enhanced Touch Menu		•	⊕
Touch Online Help			⊕
MScript Removal			⊕
Login Settings Moved to the configuration.ini File			⊕
Improved Search Functionality		⊕	⊕
Server URL Auto-Population Removal		•	⊕
Documents for Mileage Sheets			⊕
Multi-Level Approvals			⊕
System Maintenance Messages			⊕
Online App Release Notes			⊕

Prerequisites

Feature	Touch App Version	4.4	
	Maconomy Version	2.5	2.6
Google Analytics Removal		•	⊕
Simplified Azure Reauthentication		•	⊕
Seamless Azure Reauthentication			⊕
Advanced Filtering for Approvals			⊕

Note: The ⊕ symbol indicates that a feature is available for Touch installations using the RESTful API only. The • symbol indicates that the feature is available for both MScript and REST.

Standard Maconomy Functionalities Unavailable in Deltek Touch

The following standard Maconomy functionalities are not available in Deltek Touch:

- Using the application offline
- Capability to hide timesheets during time registration
- Printing timesheets and expense sheets
- Proxy time and expense registration
- Approvals which are not based on approval hierarchies
- Ability to customize the timesheet header
- Ability to switch the language in the application

Maconomy Configuration

This section focuses on the setup changes you need to make to be able to use Touch.

Maconomy Dialog Access

Make sure that users have full (Read, Create, Update, and Delete) access to the following dialogs:

Login

- API_CurrentEmployee
- API_CurrentUserRole
- CurrentEmployeeApprovalsAPI

Time

- TimeRegistration
- DailyTimeRegistration
- JobFavorite
- TimeSheets

Prerequisites

- DailyCheckIn

Expense

- ExpenseSheets
- MileageSheets
- DocumentArchives
- Notes

Absence and Allowance

- AbsenceCalendarLines
- AbsenceEntryOverview

Purchase Orders

- PurchaseOrders
- DocumentArchives

Approvals

- TimeRegistrationDetails
- QuoteEditing
- ApproveJobQuotesByEmployee
- ApprovePurchaseOrdersByEmployee
- ApprovePurchaseOrderLinesByEmployee
- ShowPurchaseOrderLines
- PurchaseOrders
- ApproveExpenseSheetsByEmployee
- ApproveExpenseSheetLinesByEmployee
- ExpenseSheetLines
- ApproveTimesheetsByEmployee
- ApproveTimesheetLinesByEmployee
- ApproveVendorInvoicesByEmployee
- ApproveVendorInvoiceAllocLinesByEmployee
- ShowInvoiceAllocationLines
- ShowVendorInvoices
- InvoiceAllocation
- ApproveDraftInvoicesByEmployee
- InvoiceEditing

In addition, Touch is using the following technical containers, for which you do not need to make any setup changes:

Find_* containers

- Find_TimeSheetLineSummaryU

Prerequisites

- Find_TimeSheetLineU
- Find_JobEmployeeControlU
- Find_ExpenseSheetLineU
- Find_PurchaseOrderLineU
- Find_RejectedTimeSheetU
- Find_RejectedExpenseSheetU
- Find_RejectedPurchaseOrderU

Popup and OptionLists containers

- Popup
- OptionLists

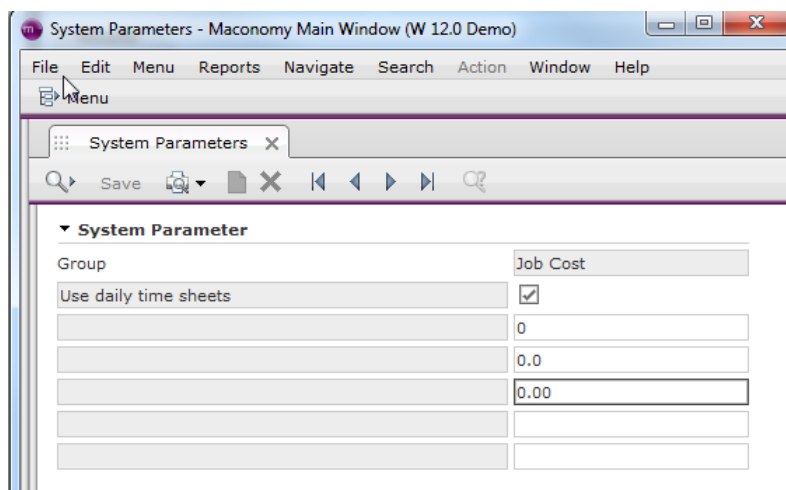
Long text containers

- maconomylongtext:PurchaseOrders
- maconomylongtext:Timesheets
- maconomylongtext:TimeRegistration
- maconomylongtext:DailyTimeRegistration
- maconomylongtext:TimeRegistrationDetails
- maconomylongtext:InvoiceEditing
- maconomylongtext:InvoiceAllocation
- maconomylongtext:PurchaseOrders
- maconomylongtext:QuoteEditing

Recommended System Parameters

Use Daily Time Sheets

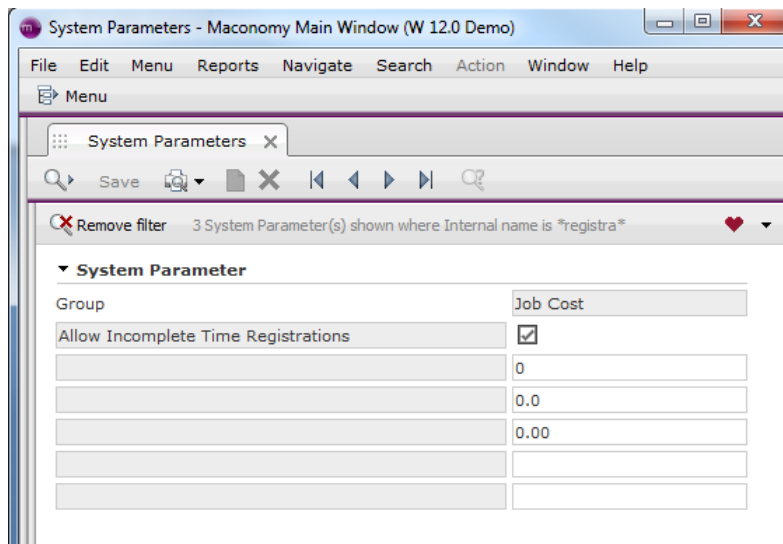
If you use Touch in **Daily** mode, make sure to mark the **Use daily time sheets** system parameter during installation to register time one a day at a time.



Allow Incomplete Time Registrations

Prerequisites

If you select the **Allow Incomplete Time Registrations** system parameter, Touch allows you to add a line (for example, only a description). This task must be completed before submission.



Allow Incomplete Expense Registrations

If you select the **Allow Incomplete Expense Registrations** system parameter, Touch allows you to add a line without any mandatory information like job and task. This task must be completed before submission. This parameter supports the Quick Capture workflow.

System Setup x

SYSTEM INFORMATION PARAMETERS AND NUMBERS

SYSTEM PARAMETERS SYSTEM NUMBERS POPUP FIELDS OP

Show: Allow Incomplete Expense and Mileage Registrations

SYSTEM PARAMETER ↺ ↻ 📄 🖨 📊

System Parameter

☒ Allow Incomplete Expense and Mileage Registrations

Group Job Cost

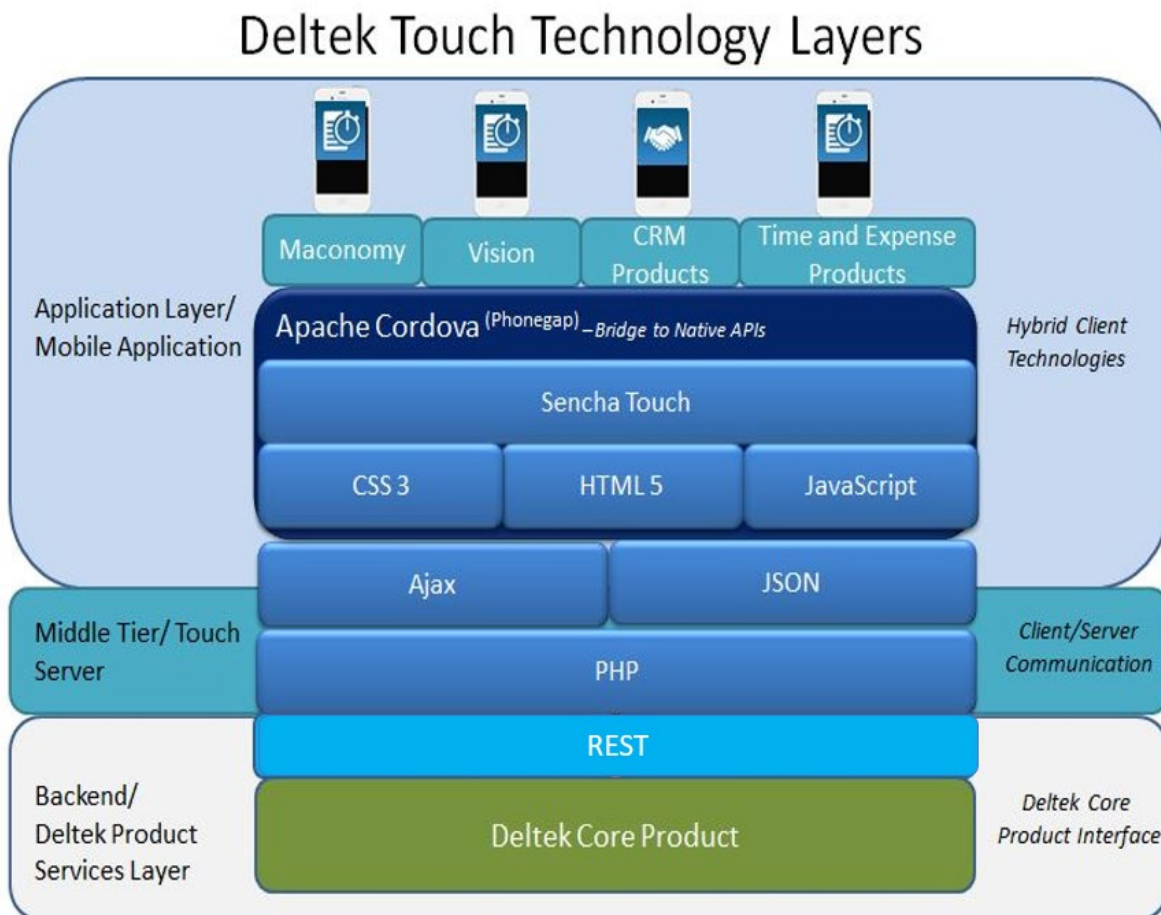
Remarks

Deltek Touch Infrastructure

The Deltek Touch infrastructure is composed of the application tier, middle tier, and services tier. The Touch server (middle tier) is used to optimize service delivery and transform data when necessary. The Touch server only communicates with the product service layer and does not have access to the database.

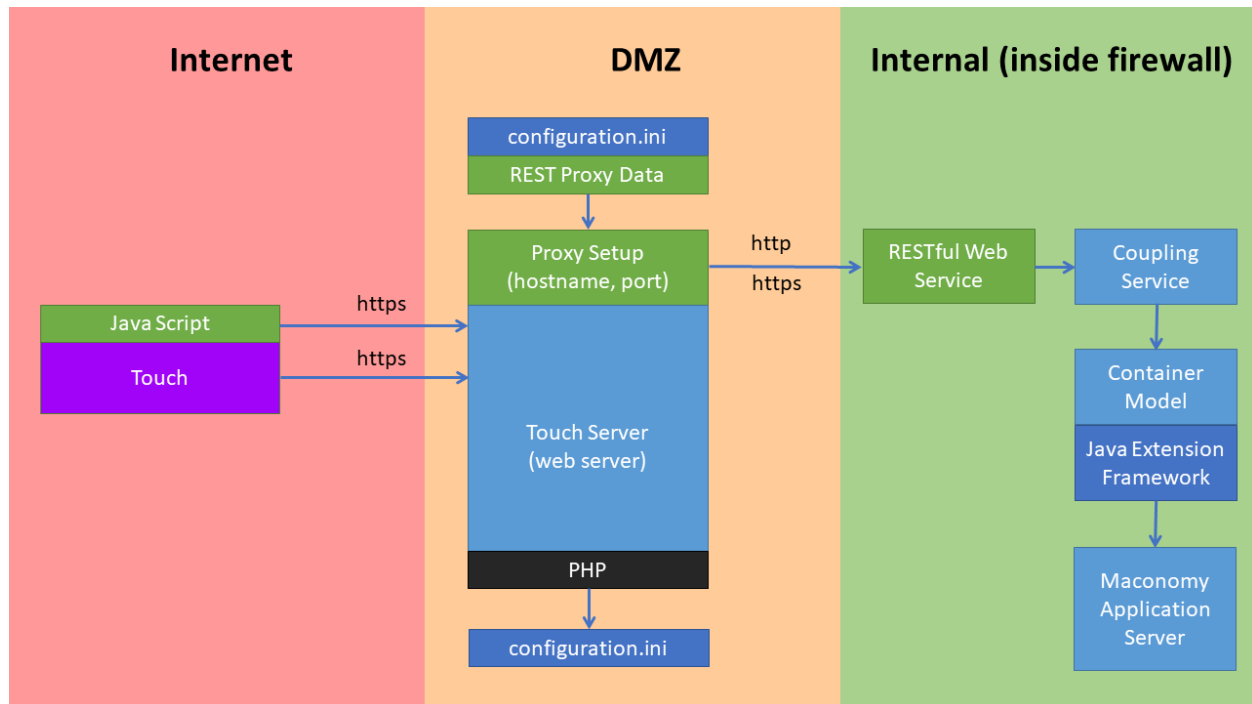
The Touch application (client tier) is a hybrid application created using HTML 5 and CSS 3 but with the ability to access the native device capabilities.

Deltek Touch Technology Layers



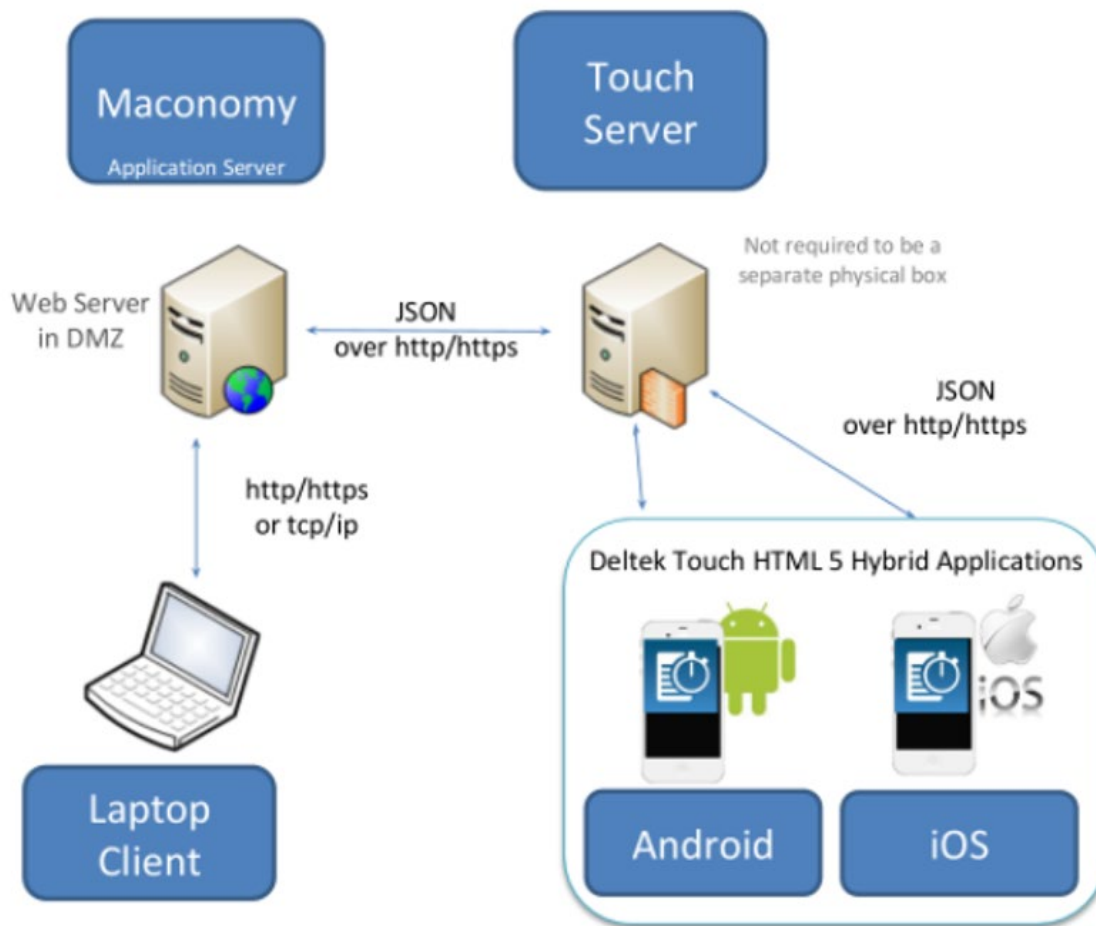
Services Tier

For Deltek Touch, the services tier corresponds to the Maconomy web services. The interaction between the Maconomy product and Touch Time (client + middle tier) is illustrated below:



Supported Deployment Scenarios

The Deltek Touch application may be installed on another IIS or Apache server, or as a separate directory on an existing Maconomy IIS or Apache web server.



Deltek Touch Security

Deltek Touch is a front-end application that integrates with Deltek's traditional back office applications, such as Maconomy. It only interacts with the web services layer of each of these applications, and no direct database interaction is performed. All data interaction is performed in the web services layer.

User Authentication Models

Deltek Touch does not introduce users and passwords, or define its own models. Instead, it uses the existing product user provisioning, authentication, and authorization models.

Deltek Touch does introduce the PIN concept for convenient application login. Once you log on to the system successfully, you can store a PIN to simplify subsequent logins. The PIN is required for all users, unless they use biometric login. Touch stores credentials for users in the device keystore/keychain. Passwords are not stored for users using third party authentication (such as Azure, OneLogin, or Okta), only the username.

Users can use biometric login (iOS Face ID and Touch ID, and Android fingerprint and face authentication) in lieu of using the PIN. This feature can be turned off

Single Sign-On Via Kerberos

The first time you log on to Deltek Touch, enter your network username, password, and domain. Once authentication is successful, you must set up your PIN or biometrics, which you can use for subsequent logins. To protect your login credentials in transit, Deltek recommends that the Touch web server be configured to use HTTPS (instead of HTTP). The domain credentials are sent from your mobile device to the Maconomy server via the Touch server.

Using HTTPS/TLS encrypts your network traffic, making it very difficult to sniff the credentials as these are passed to the web server. On the Maconomy server, the domain credentials are used only to obtain a Kerberos ticket for the Maconomy service on your behalf. Your domain credentials are not stored on the Maconomy server. As soon as this ticket is obtained, the credentials are deleted.

Single Sign-On Via Azure

The first time you log on to Deltek Touch, enter your Azure credentials. The Azure username is entered in Deltek Touch, but the password is entered in the native Windows Azure login screen. Once authentication is successful, you must nominate a PIN or set up biometrics, which you can use for subsequent logins.

Your Azure credentials are not stored on the Touch server or the Maconomy server. Instead, the token returned by Azure is sent to the Maconomy server to perform the Maconomy authentication. To protect the Azure token in transit, Deltek recommends that the Touch web server as well as the REST proxy server be configured to use HTTPS (instead of HTTP).

Sign on Using Maconomy Credentials

If Deltek Touch is not set up with Single Sign-On, you log on using your Maconomy credentials (username and password). When logging in for the first time using your Maconomy credentials, you have the option to set up your PIN or biometrics, which you can later use for future logins. You can reset the PIN anytime or switch to using your Maconomy credentials instead of PIN.

On the Maconomy server, the credentials are used for logging on to the Maconomy system. In a successful login, a cookie is created and sent back to your mobile device. From that point forward, any communication between the mobile device and Maconomy server includes the cookie for authentication. This means that the Maconomy credentials are sent from the mobile device to the Maconomy server only for the login. The password is not stored and cannot be reverse-engineered on the Maconomy server.

ICR Metadata Storage

In addition to attaching receipts to your expense reports using Quick Capture, Deltek together with Verifyi optimized this functionality to include the scanning of receipts to automatically fill in details for your expense sheets using intelligent character recognition (ICR).

You can utilize this feature either by capturing a photo, or selecting a photo from your device's gallery. Through Verifyi's ICR hosted system, the photo is converted to machine-readable data. The uploaded photo and extracted data are deleted from Verifyi's ICR hosted system after use. Verifyi does not store any metadata. Once a file is uploaded to a secure, encrypted S3 bucket, Verifyi loads this file into memory, deletes it from storage, performs data extraction, and returns the data to Deltek.

Certificates and Protocols

For security reasons and due to the SSL restriction enforced by Apple, Deltek Touch no longer supports HTTP links, which include HTTP for the online help URL (see HELPDOCURL in [configuration.ini](#)).

All URLs that Deltek Touch uses must be HTTPS. This includes the Touch server URL, which you enter when you use the application for the first time, and the REST proxy URL.

When using Secure Sockets Layer (SSL), you must have a certificate issued by a trusted certificate authority. You must not use self-signed certificates or SHA-1 encrypted certificates. Wild card certificates work if these come from a trusted certificate authority but are not considered best practice.

Starting with Touch 3.5, SSL certificate pinning is supported. The Touch app validates the SSL certificate used for the Touch server URL against the fingerprint you configured in the SSL_CERT_FP1 and/or the SSL_CERT_FP2 settings in configuration.ini. To support a smooth transition when the SSL certificate expires, the fingerprint of both the old and new certificate should be provided.

For security reasons, Deltek recommends that you disable HTTP on the Touch server.

To disable HTTP on the Touch Server:

1. Remove any configuration for Port 80 from the Edit Site Bindings dialog box for IIS and httpd.conf (or any relevant .conf file to manage VirtualHosts) on Apache.
2. Disable Basic Authentication on the Authentication page for IIS.
3. Verify AuthType Basic is not present on the directory directive for Apache.

Deltek Touch does not allow connections to servers with either TLS 1.0, TLS 1.1, or SSL 3 (and earlier) enabled, or any earlier protocols. Only TLS 1.2 and 1.3 may be enabled for connections to be successful.

If any of the deprecated protocols are enabled, users trying to connect to IIS servers when running Deltek Touch will get an error, such as “Invalid Server URL”. Resolve this issue by performing the following steps on the Touch Server:

1. Deprecated transport layers disabled – TLS 1.0, TLS 1.1, and SSL 3 (or earlier).
2. Supported transport layers enabled (if not already) – TLS 1.2 and/or 1.3.
3. Restart the server.

Note: See a support article from Microsoft on how to disable the deprecated transport layers: <https://support.microsoft.com/en-us/kb/187498> (How to disable PCT 1.0, SSL 2.0, SSL 3.0, or TLS 1.0 and 1.1 in Internet Information Services).

Security Assessments

Deltek strives to deliver highly secure applications. Therefore, three independent security assessors, GuidePoint Security, Stratum, and VerSprite, have performed a Mobile Application Security Assessment with the intent of evaluating the security posture of Deltek’s Mobile Touch suite of applications. The security baselines for the scope of the audit were the OWASP Top 10 Web Application vulnerabilities and the OWASP Top 10 Mobile vulnerabilities.

Note: For more information, see https://www.owasp.org/index.php/Top10#OWASP_Top_10_for_2013.

Load Balancing

Maconomy 2.6 (or later)

Load balancing improves app performance and reliability. Starting with Maconomy 2.6 and Touch 4.0, load balancing is fully supported without any special setup.

The Touch server supports load balancing. You can set up multiple Touch Servers behind a load balancer (for example, ELB or ALB). This allows you to route the requests from the Deltek Touch clients running on various mobile devices through multiple Touch Servers.

The Touch Servers forward the requests to a Maconomy application server, which can be load balanced.

Maconomy 2.5 (or earlier)

The Touch servers forward the requests to a Maconomy web server. Deltek Touch does not support load balancing on this level in the sense that you cannot apply a load balancer using several Maconomy web servers. The reason is that Deltek Touch neither supports sticky sessions in the MScript web service nor cookies.

For each user, the MScript web service uses a session, which is a physical file located on the Maconomy web server. All requests from a user must reach the Maconomy web server hosting the session file that corresponds to the user's session.

Therefore, in case you have a load balancer in front of the Maconomy web servers (for example, for security reasons), you need to make sure all requests coming from the Touch servers are routed to the same (one) Maconomy web server. In case you have a setup wherein you use, ELB/ALB for dynamic IP addresses for example, but you have one Maconomy web server, this is supported if you disable the session IP validation (in the CGI setup .I file, set SessionIPCheck = 0).

Touch load balancing can be on the following levels:

- **Touch server:** This can always be load balanced regardless of the Touch version you have.
- **Maconomy web server:** This can be load balanced if you have Maconomy 2.5.4 and Touch 3.8. Load balancing of the Maconomy web server is supported in Maconomy 2.5.4 and Touch 3.8 if REST is used for all functional areas. This means the configuration.ini / tenant.ini has:

```
[REST_MODULE_SETUP]
USERESTFORTIME="true"
USERESTFOREXPENSE="true"
USERESTFORAPPROVALS="true"
```

- **Maconomy application server (REST web service)**
 - REST 1: This is stateless and can be load balanced.
 - REST 2: Starting with Maconomy 2.5.1 and due to performance reasons, some states need to be managed to improve performance. However, this is stored in the database, which allows load balancing. The web client works the same way. Before Maconomy 2.5.1, REST 2 can also be load balanced but via sticky sessions.

Microsoft IIS Web Server Configuration

This section contains procedures you have to perform to install Deltek Touch on Windows Servers.

Windows Server 2016, 2019, or 2022

Perform this procedure if you are going to install Deltek Touch on Windows Server 2019 or 2022. The Deltek Touch installer checks if Microsoft Internet Information Services (IIS) is already installed before proceeding with the installation. The installation terminates if IIS is not yet installed.

Note: Deltek Touch requires **Anonymous Authentication** and does not support **Basic Authentication**.

To configure Microsoft IIS web server on Windows 2019 or 2022 server:

1. Click **Start » Windows Administrative Tools » Server Manager**.
2. On the left pane, click **IIS**.
3. On the right pane, scroll down to the **ROLES and FEATURES** section.
4. From the **Tasks** drop-down list, select **Add Roles and Features**. The Add Roles and Feature Wizard displays.
5. Click **Next**.
6. Select the **Role-based or feature-based installation** option.
7. On the Select Destination Server page, verify if the **Select a server from the server pool option** is selected. Click **Next**.
8. On the Select server roles page, expand **Web Server (IIS) » Web Server » Application Development**, select the **CGI** and **ISAPI** extensions.
9. On the Select server roles page, expand **Web Server (IIS) » Web Server » Management Tools**, and then select **IIS Management Scripts and Tools**.
10. Click **Next**.
11. On the Select features page, click **Next**, and then click **Install**.

Deltek Touch Installation on Windows Server

Before you proceed, make sure that you downloaded the server component from Deltek Software Manager (DSM). Once the server part is installed, download the application from *Google Play Store* or *Apple App Store* and install it in your device.

Attention: For more information about DSM, see the [Downloading Deltek Products using Deltek Software Manager](#) section in this document.

To install the Deltek Touch application:

1. Run **DeltekTouchMaconomy44.exe** to launch the installation program.

Note: Taking into consideration the enhanced security in Windows Server 2016, Deltek recommends selecting the **Run as Administrator** option when launching the installation executables even if you (as the logged-on user) have local administrative rights. You can access this option by right-clicking the installation executable file name in Windows Explorer and then clicking **Run as Administrator** on the shortcut menu.

2. On the Welcome to the Deltek Touch Maconomy 4.4 Installation Wizard page, click **Next**.
3. On the Select Web Server Type page, select one of the following options, and click **Next**.
 - **Apache Web Server**
 - **IIS**
4. On the IIS Website Information page, select or enter the default Web site, and click **Next**.

Note: Select the **Please check the box if the website is configured for SSL** checkbox to use the HTTPS protocol when transmitting data over the internet.

If no site is displayed in the drop-down list, make sure you completed the steps from the [Microsoft IIS Web Server Configuration](#) section for your specific Windows version.

If you do not have an IIS site already, starting with Touch 3.0, it is now possible to create a dedicated IIS Site for Deltek Touch, within the Touch installer. Click the **New Site** button if you wish to create a new IIS Site. You will need to supply the following details:

- a. **Site Name:** Name of your new IIS website.
 - b. **Physical Path:** Local directory for locating your website.
 - c. **Binding**
 - i. **Type:** HTTP or HTTPS
 - ii. **IP Address**
 - iii. **Port Number**
 - iv. **Host Name**
 - v. **SSL Certificate** (visible if type is HTTPS)
5. Provide REST proxy data.

Apache Web Server	IIS
<p>If you selected Apache Web Server in step 3, the REST Proxy Data page displays. Provide the necessary information, and click Next.</p> <ul style="list-style-type: none"> ▪ Host Name: Enter the host name of the REST endpoint machine (for example, touch.<company name>.com). ▪ Port Number: Enter the port number if there is a specific port connecting to REST endpoint. ▪ Language: Enter a specific Language to use in Maconomy core (for example, en-US). ▪ Database: Enter the short name of the Maconomy core. 	<p>If you selected IIS in step 3, the REST Proxy Data page displays. Provide the necessary information, and click Next.</p> <ul style="list-style-type: none"> ▪ Host Name: Enter the host name of the REST endpoint machine (for example, touch.<company name>.com). ▪ Port Number: Enter the port number if there is a specific port connecting to REST endpoint. ▪ Language: Enter a specific Language to use in Maconomy core (for example, en-US). ▪ Proxy Pass Client Code: Enter the first pattern from rewrite rules if applied (for example, in resttouch/containers/*, the value is "resttouch"). ▪ Database: Enter the short name of the Maconomy core. ▪ IIS Site Name: Enter the IIS application name on where the rewrite rules are applied (for example, DeltekTouch). If the rewrite rules are set to IIS Site Level (for example, Default Web Site), this field should be blank.

6. On the Choose Apache Installation Directory page, verify if the default location for the Apache Web software is correct, and click **Next**. Otherwise, click **Browse** to navigate to the installation folder, and click **Next**.

Note:

- The default folder is C:\Program Files (x86)\Apache on a 64-bit machine or C:\Program Files\Apache on a 32-bit machine.
- If you selected Apache Web Server, the files are installed onto <INSTALL_DIR>\htdocs\DeltekTouch\Maconomy\Time_<MaconomyLanguage>. If multiple instances of Deltek Touch for Maconomy are installed (using the same Maconomy language) on Apache web server, the folder name will be incremented.

For example:

1st instance -

<INSTALL_DIR>\htdocs\DeltekTouch\Maconomy\Time_<MaconomyLanguage>

2nd instance -

<INSTALL_DIR>\htdocs\DeltekTouch\Maconomy\Time_<MaconomyLanguage>_1

3rd instance -

<INSTALL_DIR>\htdocs\DeltekTouch\Maconomy\Time_<MaconomyLanguage>_2

You can rename the "Time_<MaconomyLanguage>_<number>" folder after the install; the updated folder name will reflect on the URL.

7. On the Deltek Maconomy Coupling Services page, enter the coupling service details, and click **Next**.

- **Hostname:** This is the hostname/IP from the Maconomy Coupling Service.

Note: Select the **Please check the box if the Coupling Service is configured for SSL** checkbox if Coupling Service is using HTTPS protocol when transmitting data over the internet. This is available for IIS only.

- **Port Number:** This is the port number from the Maconomy Coupling Service.

8. On the Choose Application Install Directory page, verify if the default location for the Deltek Touch software is correct, and click **Next**. Otherwise, click **Browse** to navigate to the installation folder, and click **Next**.

Note: If you selected IIS, the default folder is C:\Program Files (x86)\Deltek\Touch on 64-bit machine or else C:\Program Files\Deltek\Touch on 32-bit machine. You can run the installer multiple times to install several instances of Deltek Touch for Maconomy. Each instance, however, requires a new virtual directory pointing to a different physical location (Install Directory).

9. On the Pre-Installation Summary page, review the installation details that you provided. The set of information details on the Pre-Installation Summary page varies, depending on the web server type that you selected in step 3.
 - If you want to change any settings, click **Back**, and make the necessary updates.
 - If you are done, click **Install** to begin the installation.

Note: If there are errors, the DeltekTouchInstall.log file displays. For **Apache Web Server**, the log file is saved in the C:\Program Files\Apache folder. For **IIS**, the log file is saved in the Application Install folder.

You can test the REST Container URL specified on the screen.

10. When the installation is done, on the InstallShield Wizard Complete page, click **Finish**.

Note: If you selected **Apache Web Server**, restart the Apache Windows service for the changes to take effect.

For Apache, the default URL is **<https://<server>:<port>/deltektouch/maconomy/time/>**, where **<server>** refers to the host name of your Deltek Touch Server and **<port>** refers to the port number that the Maconomy server uses to listen for requests.

If you encounter a PHP error after the installation, go to **C:\Program Files\Apache folder\conf**. If there is any php_module in the httpd.conf or if it is not present at all, add the following line:

LoadModule php_module "<PHP folder>/php8apache2_4.dll"

Then restart the Apache Web Server for the changes to take effect. This PHP module file name was changed on PHP 8.0. For more information, see https://php.watch/versions/8.0/mod_php-rename.

For IIS, the default URL is usually **<https://<server>/deltektouch/maconomy/time/>**.

Deltek Touch Installation on Linux Server

Perform this procedure if you are going to install the Deltek Touch on a Linux server.

Prerequisite

Before you proceed with the PHP upgrade, make sure that you alter the channel subscription and select the optional repository.

Attention: For more information, see <http://snippets.roozbehk.com/post/35750940300/php-mbstring-missing-on-red-hat-enterprise-linux-6>.

OEL 8

The recent version is PHP 8.0.30 for OEL 8 with Apache 2.4.

For the Apache 2.4 installation:

1. Install the Apache package.

```
sudo yum install -y httpd
```
2. Enable Apache.

```
sudo systemctl enable httpd
```
3. Start Apache.

```
sudo systemctl restart httpd
```
4. Enable HTTP connection through port 80.

```
sudo firewall-cmd --add-service=http --permanent
```
5. Reload the firewall.

```
sudo firewall-cmd --reload
```

For PHP 7.4.6 installation or upgrade:

In the terminal window, run the following commands:

1. Configure the Oracle Linux package repos to use PHP 7.

```
sudo yum install -y oracle-php-release-el7
```

After the command is run, yum installs PHP 7 by default rather than PHP 5.
2. Install PHP 7.

```
sudo yum install -y php
```

The command installs php, php-cli, and php-common.
3. Restart Apache.

```
sudo systemctl restart httpd
```
4. Verify installation.

```
php -v
```

For PHP 8.0.30 installation or upgrade:

In the terminal window, run the following commands:

1. Install EPEL Repository:

The Extra Packages for Enterprise Linux (EPEL) repository provides additional packages for Enterprise Linux.

```
sudo dnf install -y epel-release
```

2. Install the Remi repository RPM package:

The REMI repository provides PHP packages. To install it, first, you need to enable the Remi repository and the required dependencies.

```
sudo dnf install https://rpms.remirepo.net/enterprise/remi-release-8.rpm
```

3. Enable the PHP 8.0 Module:

After enabling the REMI repository, you need to reset the PHP module and enable the PHP 8.0 module.

```
sudo dnf module reset php
```

```
sudo dnf module enable php:remi-8.0
```

4. Install PHP 8.0:

Finally, install PHP 8.0 along with any other necessary PHP extensions.

```
sudo dnf install -y php
```

5. Restart Apache.

```
sudo systemctl restart httpd
```

5. Verify installation.

```
php -v
```

To install the application:

1. Copy **DeltekTouchMaconomyLinux43.tar** and save it to a temporary folder on a Linux machine.
2. Extract the TAR file using **tar -xvf DeltekTouchMaconomyLinux43.tar**. The files are extracted to the Linux sub-directory.
3. Update the following properties in install **DeltekTouch.sh** within the section enclosed in "-----".

- APACHE_PORT
- PHP_INSTALLED
- APACHE_WEB_ROOT
- INSTALL_DIRECTORY
- URLLDomain
- CLIENTURL

- REST_HOST_NAME
- REST_PORT_NUMBER
- REST_LANGUAGE
- REST_DATABASE

4. Run the following command from the terminal to install the software:

```
./installDeltekTouch.sh
```

Note: Make sure you run the command as root user.

5. Add rewrite rules. Update the httpd.conf file to add the lines under #Proxy Rules.

```
ProxyPass "/< REST_PROXYPASS_CLIENT_CODE>/containers" "<protocol://IP:CSPORT>
/containers" retry=0
```

```
ProxyPass "/< REST_PROXYPASS_CLIENT_CODE>/filedrop"
"<protocol://IP:CSPORT>filedrop" retry=0
```

```
ProxyPass "/< REST_PROXYPASS_CLIENT_CODE>/auth" "<protocol://IP:CSPORT>/auth"
retry=0
```

```
ProxyPass "/< REST_PROXYPASS_CLIENT_CODE>/maconomy-api"
"<protocol://IP:CSPORT>" retry=0
```

```
ProxyPass "/< REST_PROXYPASS_CLIENT_CODE>/logging" "<protocol://IP:CSPORT>"
retry=0
```

6. After the installation, restart the Apache Web server for the changes to take effect.

Deltek Touch for Maconomy Setup

This section contains information on how to set up Deltek Touch, corresponding service pack, hot fix, web services, and related configuration settings.

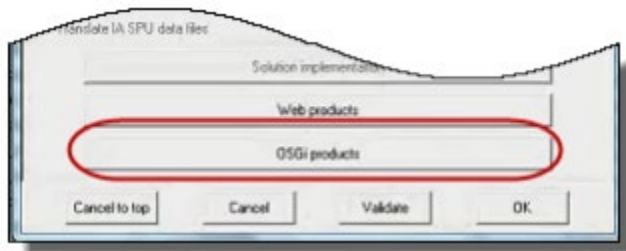
Maconomy RESTful Web Services

Enable RESTful Web Services in Maconomy

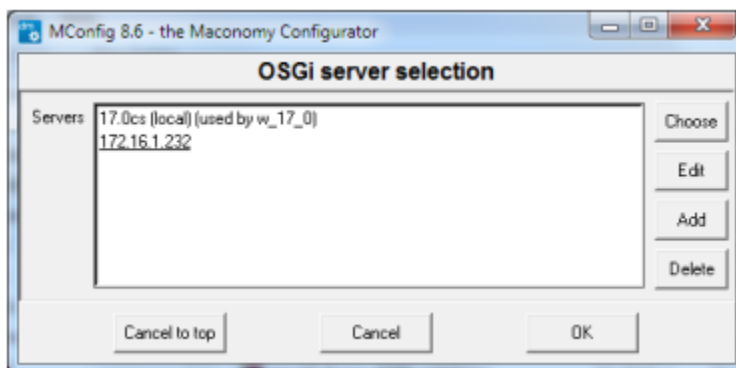
The RESTful Web services need to be enabled in the Coupling Service. If this is already the case, continue with the Proxy Server setup. Otherwise, perform the instructions discussed in this section.

To enable the RESTful web services:

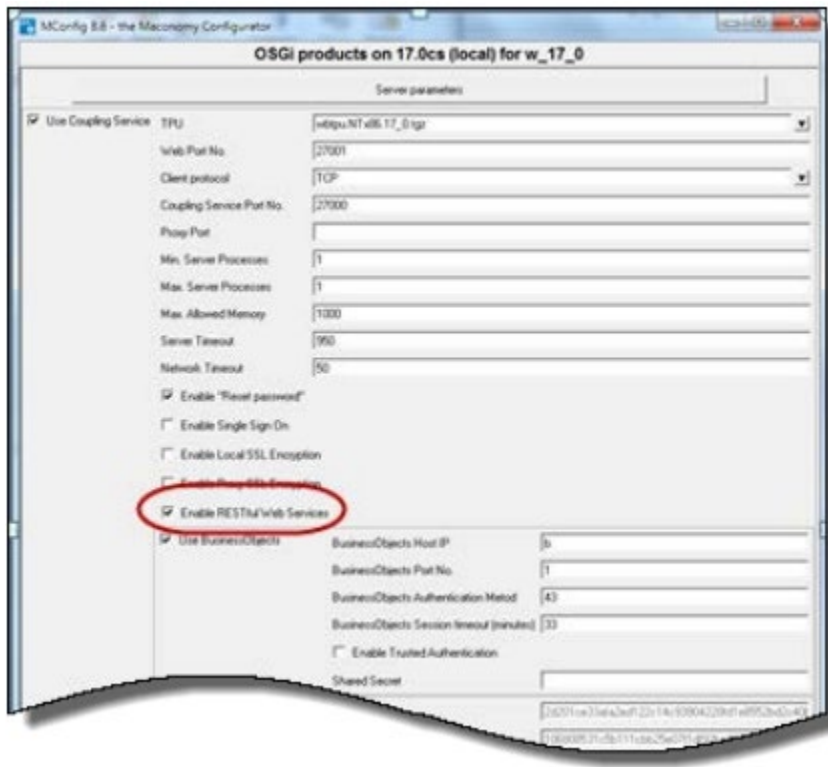
1. Right-click the MConfig executable, select **Run as administrator**, and follow the prompts accepting all default values.
2. In the MConfig Main window, double-click the application to open.
3. In the Application Instance window, click **OSGi products**.



4. On the **OSGi Server Selection** screen, select the Coupling Service to update.



5. Select the **Enable RESTful Web Services** option.



6. Click **OK** to save.
7. When the SSL warning displays, click **OK** to return to the Application Instance window.
8. Click **OK** to accept the changes and return to the main screen.
9. Click **Next**, **Next**, and **Yes** to complete the installation.

Proxy Server Setup

This section describes how to set up the proxy server for the Maconomy RESTful web service.

Apache

To enable the proxy server in Apache:

1. Open the "httpd.conf" file.
2. Add the following line of codes:

```
ProxyRequests Off
ProxyPreserveHost On
```
3. Under the <VirtualHost>, add the following line of code:

```
AllowEncodedSlashes NoDecode
```
4. Add the "ProxyPass" for containers, filedrop, maconomy-api and logging REST API. For example:

```
ProxyPass /containers http:// 10.1.1.11:1111/containers retry=0 nocanon
ProxyPass /filedrop http:// 10.1.1.11:1111/filedrop retry=0 nocanon
ProxyPass /auth http:// 10.1.1.11:1111/auth retry=0 nocanon
```

Deltek Touch for Maconomy Setup

```
ProxyPass /maconomy-api http:// 10.1.1.11:1111 retry=0 nocanon
ProxyPass /logging http:// 10.1.1.11:1111/logging retry=0 nocanon
ProxyPass /messages http:// 10.1.1.11:1111/messages retry=0 nocanon

<Proxy *>
    Order deny,allow
    Allow from all
</Proxy>
```

5. Restart the Apache Server.

IIS

If you use the Touch 2.2 (or later) Installer to install a new REST Touch or upgrade to REST Touch, most of the steps described below will be done by the Installer.

1. Install the Microsoft IIS URL Rewrite 2.0.
2. Install the Application Request Routing (ARR).
3. Set server variable HTTP_X_FORWARDED_PROTO.
4. Create rewrite rules for container, filedrop, auth, maconomy-api, logging, and unencodedURLRule.
5. Update configuration.ini.
6. Enable preserveHostHeader.
7. Enable support for ":" and "/" in web requests

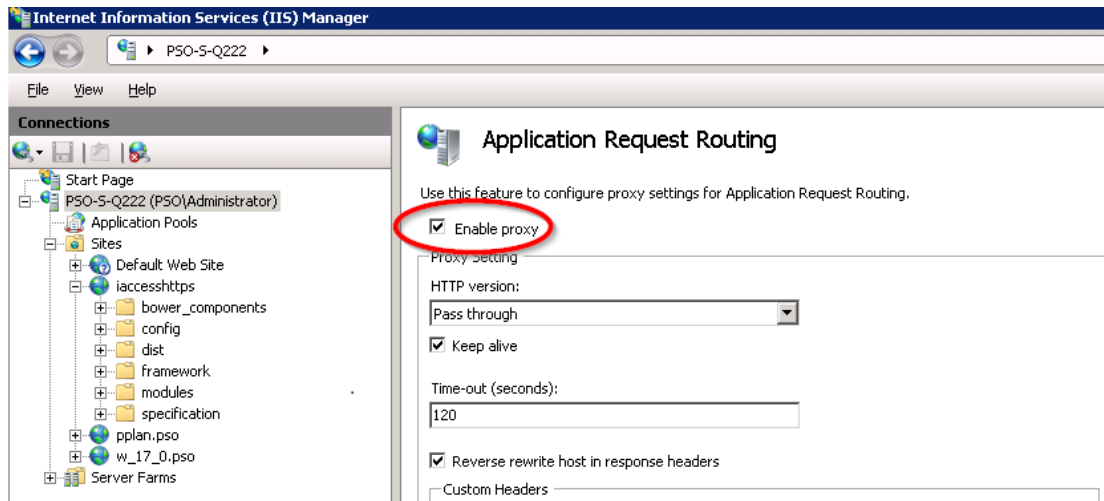
The only remaining manual setup step is switching to using HTTPS.

In case you do not use the Installer or if your installation is unsuccessful, use the following manual steps to set up the REST proxy on IIS.

1. Before you set up the proxy server in IIS, you need to install the **Microsoft IIS URL Rewrite 2.0** and install the **Application Request Routing (ARR)**.

Attention: For more information on IIS URL Rewrite, see <http://www.iis.net/downloads/microsoft/url-rewrite>. For more information on installing the ARR plugin, see <http://www.microsoft.com/en-us/download/details.aspx?id=39715>.
In IIS 8.0 and 8.5, you need to install the "Web Platform Installer" before you can install the ARR plugin.

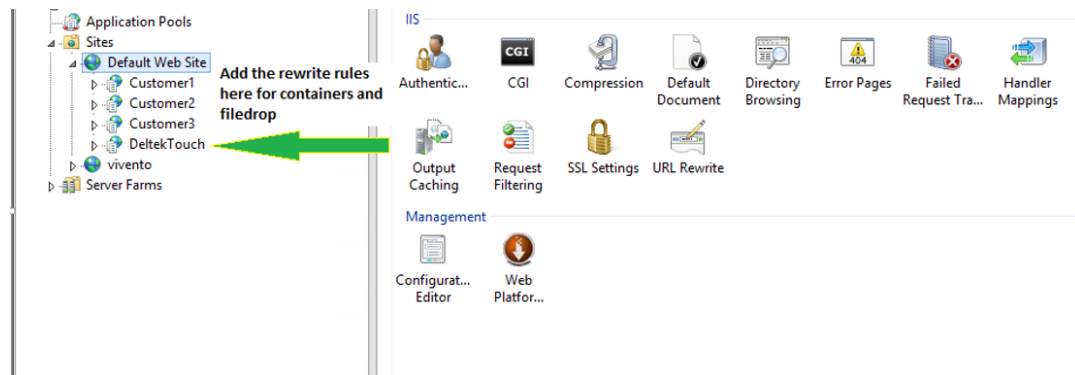
2. Restart IIS Manager.
3. In the Application Request Routing configuration window, click **Server Proxy Settings**.
4. Select **Enable proxy**.



To perform the proxy server setup:

1. Add the rewrite rules for the proxy in the IIS manager. First click the website where you want to define the rewrite rules.

Deltek recommends that rules must be added to the local site (for example, DeltekTouch) not to the root site (for example, Default Web Site).



2. Click the applet **"URL Rewrite."**
3. Add the rules for containers REST API for a specific client. See [Containers REST API](#) for details.
4. Add the rules for filedrop REST API for a specific client. See [Filedrop REST API](#) for details.
5. Add the rules for Auth REST API for a specific client. See [Auth REST API](#) for details.
6. Add the rules for Maconomy-API for a specific client. See [Maconomy-API](#) for details.
7. Add the rules for Logging REST API for a specific client. See [Logging REST API](#) for details.
8. Add the rules for Messages REST API for a specific client. See [Messages REST API](#) for details.
9. Add the rules for UnencodedURLRule API for a specific client. See [UnencodedURLRule API](#) for details.
10. Restart the IIS Manager.

Set Up HTTPS

To set up HTTPS:

1. Open the **URL Rewrite** applet.
2. In the **Actions** pane, click **View Server Variables....**
3. On the Server Variables window, click **Add...** and add the variable **HTTP_X_FORWARDED_PROTO**.
4. In the configuration.ini file, change the **REST_HTTP_PROTOCOL** to **https** and **REST_DOMAIN_NAME** (if not set) to an external URL accessible thru Internet. (for example, touch.delttek.com).
5. Restart the Web server.

Add Rewrite Rules

Use these steps to add the rewrite rules in IIS for the proxy server for Maconomy RESTful web service.

Note: The protocol (HTTP/HTTPS) set on the rewrite rules created by the Touch Installer is based on the **Please check the box if the website is configured for SSL** checkbox on the IIS Website Information screen in the Touch Installer. In case this does not match the Coupling Service protocol, update the protocol on the rewrite rules manually.

Containers REST API

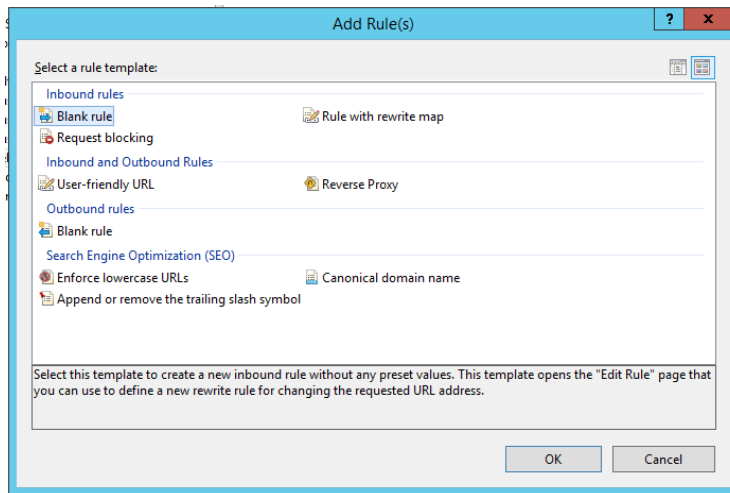
The rules can be added on application or site level.

To add rules to the containers REST API:


1. If the rewrite rules are on the IIS application, you must specify both **REST_IIS_TOUCH_FOLDER_NAME** and **REST_PROXY_PASS_CLIENT_CODE**.
2. If the rewrite rules are on the IIS site, both **REST_IIS_TOUCH_FOLDER_NAME** and **REST_PROXY_PASS_CLIENT_CODE** should be empty.

To add the rules to container API:

1. Open the **URL Rewrite** applet.
2. In the Actions pane, click **Add Rule(s)**.
3. On the Add Rule(s) dialog box, select the **Blank Rule** option in the **Inbound rules** section.



4. Click **OK**.
5. On the Edit Inbound Rules window, enter or select the appropriate values:

 **Edit Inbound Rule**

Name:
Containers

Match URL

Requested URL:
Matches the Pattern

Using:
Wildcards

Pattern:
containers/*

☒ Ignore case

Test pattern...

Conditions

Server Variables

Action

Action type:
Rewrite

Action Properties

Rewrite URL:
http://127.0.0.1:4111/containers/(R:1)

☒ Append query string

☐ Log rewritten URL

☐ Stop processing of subsequent rules

- **Name:** Set the rule name (for example, Containers).
- **Requested URL:** Select the Matches the **Pattern** option.
- **Using:** Select the **Wildcards** option.
- **Pattern:** Enter the pattern. For example, **proxycode/containers/(.*)**.
- **Ignore case:** Select this option.
- **Conditions:** Do not change anything.

- **Server Variables:** Add the HTTP_X_FORWARDED_PROTO with an **https** value if the Touch server is setup with https. Otherwise, use **http**. Check **Replace the existing value**.
- **Action**
 - **Action type:** Select the **Rewrite** option.
 - **Action Properties**
 - **Rewrite URL:** Enter the URL for the RESTful API. For example, `http://10.2.6.131:8082/containers/{R:1}`.
 - **Append query string:** Select this option.
 - **Log rewritten URL:** Do not select this option.
 - **Stop processing of subsequent rules:** Do not select this option.
- 6. On the right pane, click **Apply**.

Filedrop REST API

To add the rules to the filedrop REST API:

1. Open the **URL Rewrite** applet.
2. In the Actions pane, click **Add Rule(s)**.
3. On the Add Rule(s) dialog box, select the **Blank Rule** option in the **Inbound rules** section.
4. Click **OK**.
5. On the Edit Inbound Rules window, enter or select the appropriate values:
 - **Name:** Set the rule name (for example, Filedrop).
 - **Requested URL:** Select the **Matches the Pattern** option.
 - **Using:** Select the **Wildcards** option.
 - **Pattern:** Enter the pattern. For example, `proxycode/filedrop/(.*)`.
 - **Ignore case:** Select this option.
 - **Conditions:** Do not change anything.
 - **Server Variables:** Add the HTTP_X_FORWARDED_PROTO with an **https** value if the Touch server is setup with https. Otherwise, use **http**. Check **Replace the existing value**.
 - **Action**
 - **Action type:** Select the **Rewrite** option.
 - **Action Properties**
 - **Rewrite URL:** Enter the URL for the RESTful API. For example, `http://10.2.6.131:8082/filedrop/{R:1}`.
 - **Append query string:** Select this option.
 - **Log rewritten URL:** Do not select this option.
 - **Stop processing of subsequent rules:** Do not select this option.
6. On the right pane, click **Apply**.

Auth REST API

To add the rules to the auth REST API:

1. Open the **URL Rewrite** applet.
2. In the Actions pane, click **Add Rule(s)**.
3. On the Add Rule(s) dialog box, select the **Blank Rule** option in the **Inbound rules** section.
4. Click **OK**.
5. On the Edit Inbound Rules window, enter or select the appropriate values:
 - **Name:** Set the rule name (for example, Auth).
 - **Requested URL:** Select the **Matches the Pattern** option.
 - **Using:** Select the **Wildcards** option.
 - **Pattern:** Enter the pattern. For example, **proxycode/auth/(.*)**.
 - **Ignore case:** Select this option.
 - **Conditions:** Do not change anything.
 - **Server Variables:** Add the HTTP_X_FORWARDED_PROTO with an **https** value if the Touch server is setup with https. Otherwise, use **http**. Check **Replace the existing value**.
 - **Action**
 - **Action type:** Select the **Rewrite** option.
 - **Action Properties**
 - **Rewrite URL:** Enter the URL for the RESTful API. For example, **http://10.2.6.131:8082/auth/{R:1}**.
 - **Append query string:** Select this option.
 - **Log rewritten URL:** Do not select this option.
 - **Stop processing of subsequent rules:** Do not select this option.
6. On the right pane, click **Apply**.

Maconomy-API

To add the rules to the Maconomy-API:

1. Open the **URL Rewrite** applet.
2. In the Actions pane, click **Add Rule(s)**.
3. On the Add Rule(s) dialog box, select the **Blank Rule** option in the **Inbound rules** section.
4. Click **OK**.
5. On the Edit Inbound Rules window, enter or select the appropriate values:
 - **Name:** Set the rule name (for example, Maconomy-API).
 - **Requested URL:** Select the **Matches the Pattern** option.
 - **Using:** Select the **Wildcards** option.
 - **Pattern:** Enter the pattern. For example, **proxycode/maconomy-api/(.*)**.

- **Ignore case:** Select this option.
 - **Conditions:** Do not change anything.
 - **Server Variables:** Add the HTTP_X_FORWARDED_PROTO with an **https** value if the Touch server is setup with https. Otherwise, use **http**. Check **Replace the existing value**.
 - **Action**
 - **Action type:** Select the **Rewrite** option.
 - **Action Properties**
 - **Rewrite URL:** Enter the URL for the RESTful API. For example, http://10.2.6.131:8082{R:1}.
 - **Append query string:** Select this option.
 - **Log rewritten URL:** Do not select this option.
 - **Stop processing of subsequent rules:** Do not select this option.
6. On the right pane, click **Apply**.

Messages REST API

To add the rules to the messages REST API:

1. Open the **URL Rewrite** applet.
2. In the Actions pane, click **Add Rule(s)**.
3. On the Add Rule(s) dialog box, select the **Blank Rule** option in the **Inbound rules** section.
4. Click **OK**.
5. On the Edit Inbound Rules window, enter or select the appropriate values:
 - **Name:** Set the rule name (for example, Messages).
 - **Requested URL:** Select the **Matches the Pattern** option.
 - **Using:** Select the **Wildcards** option.
 - **Pattern:** Enter the pattern. For example, **proxycode/messages/(.*)**.
 - **Ignore case:** Select this option.
 - **Conditions:** Do not change anything.
 - **Server Variables:** Add the HTTP_X_FORWARDED_PROTO with an **https** value if the Touch server is setup with https. Otherwise, use **http**. Check **Replace the existing value**.
 - **Action**
 - **Action type:** Select the **Rewrite** option.
 - **Action Properties**
 - **Rewrite URL:** Enter the URL for the RESTful API. For example, http://10.2.6.131:8082/messages/{R:1}.
 - **Append query string:** Select this option.
 - **Log rewritten URL:** Do not select this option.
 - **Stop processing of subsequent rules:** Do not select this option.
6. On the right pane, click **Apply**.

Logging REST API

To add the rules to the logging REST API:

1. Open the **URL Rewrite** applet.
2. In the Actions pane, click **Add Rule(s)**.
3. On the Add Rule(s) dialog box, select the **Blank Rule** option in the **Inbound rules** section.
4. Click **OK**.
5. On the Edit Inbound Rules window, enter or select the appropriate values:
 - **Name:** Set the rule name (for example, Logging).
 - **Requested URL:** Select the **Matches the Pattern** option.
 - **Using:** Select the **Wildcards** option.
 - **Pattern:** Enter the pattern. For example, **proxycode/logging/(.*)**.
 - **Ignore case:** Select this option.
 - **Conditions:** Do not change anything.
 - **Server Variables:** Add the HTTP_X_FORWARDED_PROTO with an **https** value if the Touch server is setup with https. Otherwise, use **http**. Check **Replace the existing value**.
 - **Action**
 - **Action type:** Select the **Rewrite** option.
 - **Action Properties**
 - **Rewrite URL:** Enter the URL for the RESTful API. For example, **http://10.2.6.131:8082/logging/{R:1}**.
 - **Append query string:** Select this option.
 - **Log rewritten URL:** Do not select this option.
 - **Stop processing of subsequent rules:** Do not select this option.
6. On the right pane, click **Apply**.

UnencodedURLRule

To add the rules to the UnencodedURLRule API:

1. Open the **URL Rewrite** applet.
2. In the Actions pane, click **Add Rule(s)**.
3. On the Add Rule(s) dialog box, select the **Blank Rule** option in the **Inbound rules** section.
4. Click **OK**.
5. On the Edit Inbound Rules window, enter or select the appropriate values:
 - **Name:** Set the rule name (for example, UnencodedURL).
 - **Requested URL:** Select the **Matches the Pattern** option.
 - **Using:** Select the **Wildcards** option.
 - **Pattern:** Enter the pattern. For example, **proxycode/containers/*.***.

- **Ignore case:** Select this option.
 - **Conditions:** Do not change anything.
 - **Server Variables:** Add the HTTP_X_FORWARDED_PROTO with an **https** value if the Touch server is setup with https. Otherwise, use **http**. Check **Replace the existing value**.
 - **Action**
 - **Action type:** Select the **Rewrite** option.
 - **Action Properties**
 - **Rewrite URL:** Enter "{UNENCODED_URL}".
 - **Append query string:** Do not select this option.
 - **Log rewritten URL:** Do not select this option.
 - **Stop processing of subsequent rules:** Do not select this option.
6. On the right pane, click **Apply**.

Preserve Host Header

To preserve the host header:

1. Open a console with Administrative privileges, and navigate to the following folder:
C:\Windows\System32\inetsrv
2. Enable **preserveHostHeader** by running the following command:

```
cd C:\Windows\System32\inetsrv
appcmd.exe set config -section:system.webServer/proxy
/preserveHostHeader:"True" /commit:apphost
```
3. Restart the Web server.

configuration.ini

The configuration.ini is a setting file utilized by Deltek Touch to provide environment information to the Touch application.

```
; *****
; Maconomy Touch Configuration File
; *****

[SERVER_DATA]
DYNAMICSCRIPT="false"
DEBUGGERFL="false"
TOUCHSERVERVER="4.1.0.0"
HELPOURL = "https://help.deltek.com/product/Maconomy/Mobile/"
CLIENTURL="https://<clientsite>/DeltekTouch/Maconomy/Time/"
REQUIREDEVICEPASSCODE="true"
ALLOW_BIOMETRICS="true"
SSL_CERT_FP1=""
```

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```

SSL_CERT_FP2=""

[PIN_SETTINGS]
MIN_LENGTH="6"
COMPLEXITY="true"
UNIQUE_HISTORY="0"
PIN_EXPIRATION="90"

[REST_LOGIN_SETUP]
REST_USEEXTERNALCREDENTIALS="false"
REST_ALLOWMACONOMYLOGINWHENUSINGEXTERNALCREDENTIALS="false"
REST_EXTERNALCREDENTIALSTYPE=""
REST_USESF="true"

[REST_PROXY_DATA]
REST_HTTP_PROTOCOL="https"
REST_DOMAIN_NAME="<clientsite>"
REST_HTTP_PORT=""
REST_PROXYPASS_CLIENT_CODE=""
REST_IIS_TOUCH_FOLDER_NAME=""
REST_CONTAINER_NAME="containers"
REST_FILEDROP_NAME="filedrop"
REST_VERSION="v1"
REST_DATABASE="<shortname>"
REST_LANGUAGE="en_US"
REST_AUTH_NAME="auth"
REST_AUTHENTICATION_TYPE="BASICAUTH"
REST_LOGGING_ENABLED="false"
REST_LOGGING_NAME="logging"
REST_MACONOMY_API="maconomy_api"
REST_MESSAGES_NAME="messages"

```

Parameters and Descriptions

This section lists the configuration.ini parameters and descriptions.

Note: When you add values to the parameters, include the quotation marks. For example,
`PIN_EXPIRATION="90".`

Parameter Name	Example Value	Default Value	Description
DYNAMICSCRIPT		"false"	<p>This parameter should be used for multitenant Touch installations.</p> <p>If set to true, the other parameters in the configuration.ini file will be ignored, and instead it will use the values set in the tenant.ini files. In the tenant.ini files, this parameter must be set to false.</p>
DEBUGGERFL		"false"	<p>If set to true, the debugging mode is enabled and it writes potential error messages in the PHP log file.</p>
TOUCHSERVERVER ER		"4.1.0.0"	<p>This parameter represents the version of the Touch server. It is set by the Touch installer and should not be changed.</p>
HELPODOCURL	"https://help.deltek.com/product/Maconomy/Mobile"		<p>This parameter sets the source path of the online user guide you see when tapping Help in the app.</p>
CLIENTURL	"https://mak1234.ads.deltek.com/35_m251bRest"		<p>This parameter is the server URL used to access the app through Web or Native Apps.</p>
REQUIREDEVICE PASSCODE		"true"	<p>This parameter controls how Touch handles users who do not have a passcode on their device. It is set to true by default.</p> <p>When set to true and the user does not have a passcode set on the device, the user cannot use Touch.</p>

Parameter Name	Example Value	Default Value	Description
			When set to false , the device passcode use is optional. If a user does not have a passcode set on the device, the user can still use Touch.
ALLOW_BIOMETRICS		"false"	<p>This parameter determines if users are allowed to use biometric authentication (fingerprint or face recognition) as an alternative for PIN. It is set to false by default.</p> <p>When set to false, biometric authentication is not allowed. Users authenticate using PIN.</p> <p>When set to true, users have the option to authenticate using PIN, fingerprint, and face recognition.</p> <div> Note: This setting is used when you upgrade to Maconomy 2.4.3. </div>
MIN_LENGTH		"6"	This parameter represents the minimum PIN length, which is set to 6 by default and allows 4-12 characters.
COMPLEXITY		"true"	This parameter represents the PIN complexity feature. It prevents you from using all the same numbers or a sequence of numbers in your PIN. It is set to true by default.

Parameter Name	Example Value	Default Value	Description
UNIQUE_HISTORY		"0"	<p>This parameter represents the limit PIN reuse. It does not allow you to use the same PIN repeatedly. By default, it is set to 0, which means you can reuse a PIN. It accepts values from 0 to 6.</p> <p>Note: Beginning with Touch 4.4, this setting is no longer applicable.</p>
PIN_EXPIRATION		"90"	<p>This parameter represents the limit on how long a PIN is valid before requiring you to change it. By default, it is set to 90 days. It accepts values from 0 (which means no limit) to 90.</p>
REST_HTTP_PROTOCOL		"https"	<p>This parameter is set by the Touch installer to "https". It represents the protocol (HTTP/HTTPS) used on the REST requests initiated from the Touch client. You can change it in the configuration.ini to "http," if you are in an early phase of the Touch installation and you do not have an SSL certificate yet. However, you can test Deltek Touch only using the Web application. Before you complete the Deltek Touch installation, you must have this parameter set to "https," else the Touch native apps will not work.</p>

Parameter Name	Example Value	Default Value	Description
REST_DOMAIN_NAME	"mak1234.ads.deltek.com"		This is the host name of the Touch server. It refers to the computer name or the IP address of the Touch server.
REST_HTTP_PORT			This is the associated port number from the host name of the Touch server. If the REST eb service is running in a secured layer, it should be in 443. Otherwise, leave this field blank or set it to the appropriate value.
REST_PROXYPASS_CLIENT_CODE	"Restm251b"		<p>Enter the first pattern from REST API set in the rewrite rules.</p> <div> <p>Note: See REST_PROXYPASS_CLIENT_CODE Example for details.</p> </div>
REST_CONTAINER_NAME		"containers"	This parameter is set by the Touch installer to "containers" and must not be changed. This parameter is used to format the REST URL and access the containers endpoint. It is used by all business functionality based on the RESTful web service.
REST_FILEDROP_NAME		"filedrop"	This parameter is set by the Touch installer to "filedrop" and must not be changed. This parameter is used to format the REST URL and access the filedrop endpoint to support attaching receipts and documents.

Parameter Name	Example Value	Default Value	Description
REST_AUTH_NAME		"auth"	<p>This parameter is set by the Touch installer to "auth" and must not be changed. It is used to format the REST URL and access the auth to support Maconomy 2FA.</p> <p>It is also used for authenticating the user in Maconomy.</p>
REST_VERSION		"v1"	<p>This parameter is set by the Touch installer to "v1" and must not be changed. It is used to format the URLs based on REST version 1.</p>
REST_DATABASE	"m251b"		<p>This is the Maconomy database shortname and is needed by the app to be able to communicate via the RESTful web service.</p>
REST_LANGUAGE	"nl_NL"		<p>This is the Maconomy language from the translations file name.</p>
REST_IIS_TOUCH_FOLDER_NAME	"MacTouchMulti"		<p>This is only used if the Deltek Touch is hosted using IIS and the rewrite rules to access the REST API have not been configured in the IIS Site Level (for example, Default Web Site).</p> <div> <p>Note: See REST IIS TOUCH FOLDER NAME Example for details.</p> </div>
REST_MACONOMY_API		"maconomy_api"	<p>This parameter is needed to use the REST Touch API.</p>

Parameter Name	Example Value	Default Value	Description
			The value must always be "maconomy_api". It is used to get details about the Maconomy installation as well as to load Touch layouts, settings, and translations.
REST_LOGGING_ENABLED		"false"	<p>This parameter is used to enable performance monitoring in Touch. The Touch installer sets this parameter to false. If you would like to do performance monitoring in Touch, set this parameter to true.</p> <p>When the parameter is set to true, Touch will log all Maconomy requests in the maconomy-monitor log file on the Maconomy server. Performance monitoring might cause some performance penalties. Only use this functionality when needed.</p>
REST_LOGGING_NAME		"logging"	This parameter is required for performance monitoring in Touch. The value is set automatically by the Touch installer, and should not be changed.
REST_MESSAGES_NAME		"messages"	This parameter is required for showing Maconomy system maintenance messages in Touch. The value is set automatically by the Touch installer, and should not be changed.

Parameter Name	Example Value	Default Value	Description
REST_USEEXTERNALCREDENTIALS	"true" "false"	"false"	<p>Use this parameter to be able to choose if you want to log in using external credentials (for example, Azure or Kerberos).</p> <p>When set to true, users can log in with external credentials.</p> <p>When set to false, users can log in with Maconomy credentials only.</p>
REST_ALLOWMACONOMYLOGINWHENUSINGEXTERNALCREDENTIALS	"true" "false"	"false"	<p>Use this parameter to hide the Maconomy login from users in an SSO environment for Kerberos, Azure, Okta or OneLogin.</p> <p>When set to true, users can use either their external or Maconomy credentials to log in.</p> <p>When set to false, users can only log in with their external credentials.</p> <p>This parameter can be used only if the REST_UseExternalCredentials parameter is set to true.</p>
REST_EXTERNALCREDENTIALSTYPE	"Kerberos" "Azure" "Okta" "OneLogin"	""	<p>Use this parameter to specify the external credential type you want to support in Deltek Touch. This parameter is case-sensitive. Make sure that the value matches the parameter name.</p> <p>You can use this parameter if the REST_UseExternalCredentials is set to true.</p>

Parameter Name	Example Value	Default Value	Description
			<p>Otherwise, the parameter is ignored.</p> <p>Use "Kerberos" to authenticate with your domain or network credentials.</p> <p>Use "Azure" to authenticate with your Azure credentials.</p> <p>If you use any other value than "", "Azure", and "Kerberos", the app will try to authenticate using the OIDC link provided by Maconomy. The value will be used as the label of the toggle shown on the Login screen if REST_AllowMaconomy LoginWhenUsingExternalCredentials is set to true.</p> <p>Use "OneLogin" to authenticate with OneLogin credentials.</p> <p>Use "Okta" to authenticate with Okta credentials.</p>
REST_USESF	"true" "false"	"true"	<p>Use this parameter to determine if the Touch app should use SafariViewController, and is applicable if Touch is set up with Azure login only. If Touch has a different login setup, this parameter is not used.</p> <p>When set to true, Touch uses the SafariViewController to show the Microsoft Azure screens, which provide a more reliable silent Azure login.</p>

Parameter Name	Example Value	Default Value	Description
			When set to false , Touch uses the InApp Browser to show the Microsoft Azure screens, which might cause issues with the silent Azure login. Consequently, users may need to provide their Azure credentials manually.
SSL_CERT_FP1	"A1 BA 5E 68 B3 15 2A 60 43 F8 6E ED 6C 77 DC 98 E5 C7 F1 D4 5C 3D 2A 3F 1B 7E C3 DC 6C 72 18 1E"		<p>This parameter is used for enhancing the security of your Touch connection. It represents the fingerprint of the SSL certificate used for the Touch URL. The Touch installer sets this parameter as an empty string. It is recommended to set this when you are enabling HTTPS for the Touch URL.</p> <p>To find the value, open the Touch url in the browser (e.g. Chrome, Edge). Open the Certificate Viewer (the value that you need is on the General tab, under SHA-256 Fingerprints, Certificate). Make sure you format this value as indicated in the example.</p>
SSL_CERT_FP2	"D1 BA 5E 68 B3 15 2A 60 56 F8 6E ED 6C 77 DC 98 C2 C7 F1 D4 5C 3D 2A 3F 23 7E C3 DC 6C 72 18 5A"		<p>This parameter is used for enhancing the security of your Touch connection. It represents the fingerprint of the SSL certificate used for the Touch URL. The Touch installer sets this parameter as an empty</p>

Parameter Name	Example Value	Default Value	Description
			string. It is recommended to set this if the fingerprint provided in SSL_CERT_FP1 is about to expire, and you want to smoothly transition to a new certificate.

REST_PROXYPASS_CLIENT_CODE Example

When setting the REST_PROXYPASS_CLIENT_CODE, you need to find the rewrite rule (in IIS or Apache) for the REST containers endpoint, and look at the Pattern.

If the Pattern is "containers/*", then REST_PROXYPASS_CLIENT_CODE should be blank. Otherwise, REST_PROXYPASS_CLIENT_CODE should contain the word before "containers/*".

For example, if the Pattern is **resttouch/containers/***, the value in REST_PROXYPASS_CLIENT_CODE should be **"resttouch"**.

Notes:

- The first pattern from container rule should be the same with filedrop rule or vice versa. For example, **resttouch/filedrop/***.
- Setting the same value for **proxyPassClientCode**, **iisTouchFolderName**, and **shortname** is not permitted as this causes login problems in the Touch app.

Edit Inbound Rule

Name: RestTouchContainerRule

Match URL

Requested URL: Matches the Pattern Using: Wildcards

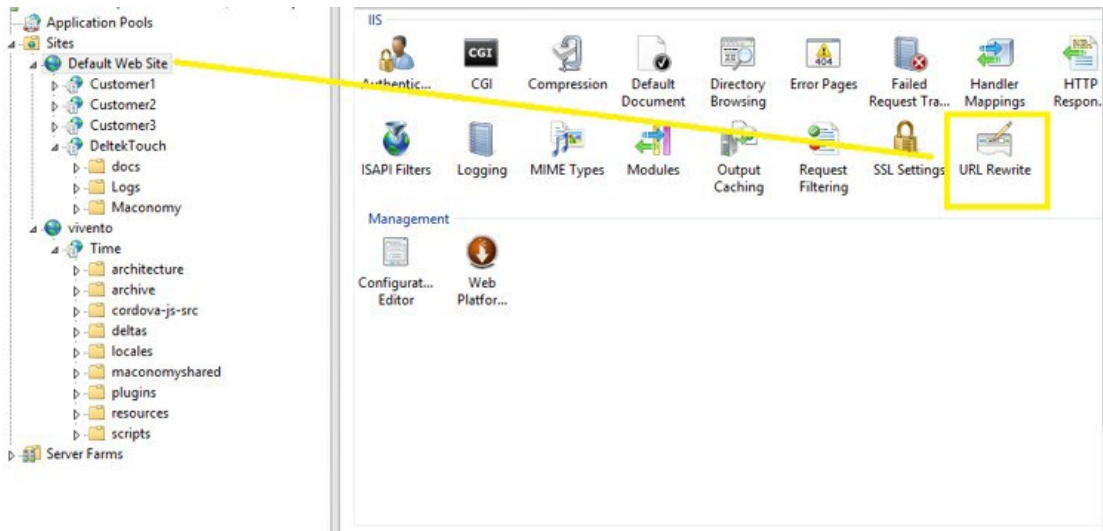
Pattern: resttouch/containers/* Test pattern...

REST_IIS_TOUCH_FOLDER_NAME Example

REST_IIS_TOUCH_FOLDER_NAME should be considered only if you use IIS for the Touch server. The value in this parameter depends on where the rewrite rules are placed in IIS.

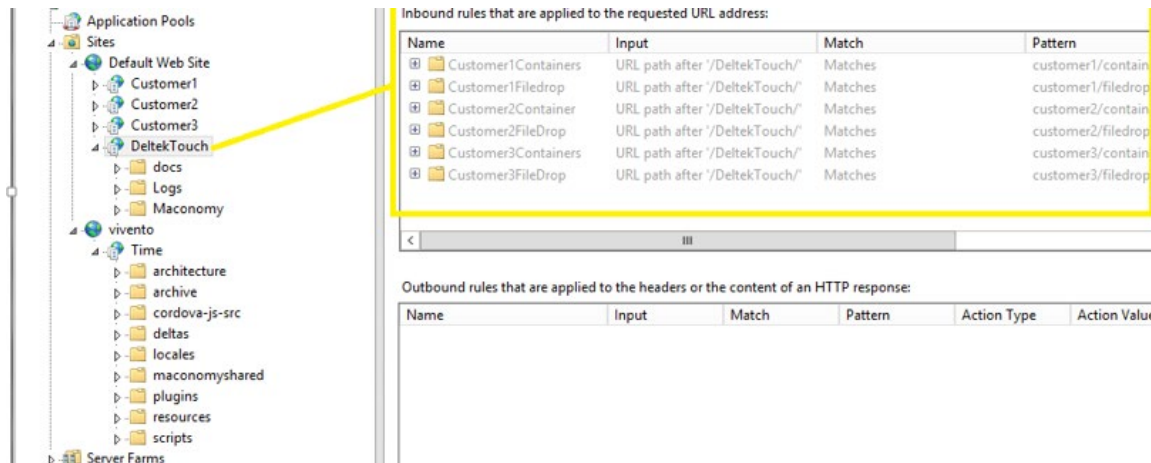
To determine if the rewrite rules have been configured in the root Web site, you need to open the IIS URL Rewrite.

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If you need to add the rewrite rules (REST API) on the IIS Site Level, leave this parameter blank.

If the rewrite rules for accessing the REST_API have not been placed in the root Web site, set the value of this parameter using the name of the website where the rewrite rules were configured.



For example, in the screenshot, the rewrite rules are in the Deltek Touch website. In the **Input** column, the **URL path after '/DeltekTouch/** value displays. In this case, use **DeltekTouch** as the value for the parameter.

REST_LOGIN_TYPE Example

The REST_LOGIN_TYPE refers to credentials (Maconomy / Kerberos / Azure / OneLogin / Okta username and password) which users need to enter the app for authentication.

Previously, this information was provided in the DeltekTouch.I file on the Maconomy web server. To better support the multitenant Touch installations (for example, to allow a customer to log in with Azure credentials in the production Touch app, and with Maconomy credentials in the test Touch app without impacting the Touch customizations), we have moved this information to the configuration.ini / tenant.ini on Touch server.

When upgrading Maconomy, you need to manually set up the login credential type in the configuration.ini / tenant.ini. Otherwise, Touch automatically uses Maconomy credentials for logins.

- Log in with **Maconomy** credentials

```
[REST_LOGIN_SETUP]
REST_USEEXTERNALCREDENTIALS="false"
REST_ALLOWMACONOMYLOGINWHENUSINGEXTERNALCREDENTIALS="false"
REST_EXTERNALCREDENTIALSTYPE=""
```

- Log in with **Azure** credentials

```
[REST_LOGIN_SETUP]
REST_USEEXTERNALCREDENTIALS="true"
REST_ALLOWMACONOMYLOGINWHENUSINGEXTERNALCREDENTIALS="false"
REST_EXTERNALCREDENTIALSTYPE="Azure"
```

- Log in with **Kerberos** credentials

```
[REST_LOGIN_SETUP]
REST_USEEXTERNALCREDENTIALS="true"
REST_ALLOWMACONOMYLOGINWHENUSINGEXTERNALCREDENTIALS="false"
REST_EXTERNALCREDENTIALSTYPE="Kerberos"
```

- Other supported external credential types: "Okta" and "OneLogin"

REST_USESF Example

The REST_USESF is relevant only if REST_LOGIN_TYPE is Azure, OneLogin or Okta.

It refers to mechanism used to show the third-party authentication screen (Azure / Okta / OneLogin) in the Touch app, as follows:

1. REST_USESF = "false"
The Touch app will use InAppBrowser.
This is available on all Maconomy versions supporting Azure / Okta / OneLogin.
Pro: Initial login always works.
Con: Instead of using PIN/biometric, you might need to login using your credentials.
2. REST_USESF = "true" (this is the default)
The Touch app will use SafariViewController.
Pro: After the initial login with credentials, you can use PIN/biometric for authentication.
Con: Few Android users are not able to do the initial login, since the third-party authentication screen is not shown.

The REST_USESF is available starting with Maconomy 2.6.1.

On earlier Maconomy (<= 2.6), the only option is to use the InAppBrowser mechanism.

On Maconomy 2.6.1 (and later), the recommendation is to use the SafariViewController (REST_USESF = "true"). In case of problems, you can revert back to the InAppBrowser, as follows:

- Maconomy 2.6.1:
 - In configuration.ini / tenant .ini, set REST_USESF = "false"
 - Replace the standard [../maconomyshared/backend/oauth2authcodereturn.php](#) file with the version provided by Touch Engineering.
- Maconomy 2.6.2:
 - In configuration.ini / tenant .ini, set REST_USESF = "false"
 - Ask the customer to add the reply URL for [../maconomyshared/backend/oauth2authcodereturn_iab.php](#)

Parameter Changes History

This section describes the parameters added to the configuration.ini file in a specific Touch version, and the purpose of each parameter in Touch functionalities.

Touch Version	New Parameters	Details
Touch 4.1.3	REST_USESF="true"	The REST_USESF Boolean parameter is added for the Seamless Azure Reauthentication feature and is used to determine if the Touch app should use SafariViewController.
Touch 4.1	REST_MESSAGES_NAME="messages"	This parameter is used for Maconomy system maintenance messages, and is under [REST_PROXY_DATA].
Touch 4.0	REST_MACONOMY_API="maconomy_api" [REST_LOGIN_SETUP] REST_USEEXTERNALCREDENTIALS="false" REST_ALLOWMACONOMYLOGINWHENUSINGEXTERNALCREDENTIALS="false" REST)EXTERNALCREDENTIALSTYPE=""	The REST Maconomy API parameter is used to make sure that Touch is using the RESTful web service. Whereas, the REST_LOGIN_SETUP is used to set up which login type to use in Touch. For example, Maconomy, Azure, Okta, and so on.
Touch 3.5	REST_LOGGING_ENABLED="false" REST_LOGGING_NAME="logging" SSL_CERT_FP1 = "" SSL_CERT_FP2 = ""	These parameters are added to cover the SSL certificate pinning and the Performance monitoring.
Touch 3.3	[SERVER_DATA] MAPSKEY=""	This parameter is added to cover the Google Maps functionality enhancement.
Touch 3.0	[SERVER_DATA] REQUIREDEVICEPASSCODE="" ALLOW_BIOMETRICS=""	These parameters are added to enhance security.
Touch 2.2	[SERVER_DATA] ANALYTICSKEY="" [PIN_SETTINGS] MIN_LENGTH="" COMPLEXITY="" UNIQUE_HISTORY="" PIN_EXPIRATION=""	This parameter is added for Google Analytics. These parameters are added to support the enhanced PIN security.

Touch Version	New Parameters	Details
	REST_PROXY_DATA	
Touch 2.0	<pre> [REST_PROXY_DATA] REST_HTTP_PROTOCOL="" REST_DOMAIN_NAME="" REST_HTTP_PORT="" REST_PROXYPASS_CLIENT_CODE="" REST_CONTAINER_NAME="" REST_FILEDROP_NAME="" REST_VERSION="" REST_DATABASE="" REST_LANGUAGE="" REST_IIS_TOUCH_FOLDER_NAME="" [REST_MODULE_SETUP] USERESTFORTIME="" USERESTFOREXPENSE="" USERESTFORAPPROVALS="" </pre>	<p>These parameters are added to support the Maconomy RESTful Web service and multitenant setup.</p> <p>These parameters are divided into the following sections:</p> <ul style="list-style-type: none"> ▪ REST_PROXY_DATA: This contains connection details parameters. ▪ REST_MODULE_SETUP: This contains parameters responsible for enabling the REST functionality in the time, expense, and approvals modules.

Touch Authentication Setup

This section describes additional steps for using non-Maconomy login types in Touch, such as SSO and Azure.

Single Sign-On (SSO) Setup

If Touch is using SSO, unicode characters are not allowed in the domain user name and/or password

If Maconomy is set up with Kerberos SSO and you prefer Touch to use SSO, the following changes are needed in the configuration.ini (or tenant.ini) file:

1. Set **REST_USEEXTERNALCREDENTIALS="true"**. By default, it is set to **"false"**.
2. Set **REST_EXTERNALCREDENTIALSTYPE="Kerberos"**. By default, it is set to **""**.

Azure Setup

If Maconomy is set up with Azure OpenID and you prefer your Deltek Touch installation to use Azure, you need to complete additional setup.

Attention: It is a prerequisite that Azure is set up for Maconomy as described in the Maconomy documentation. Prior to enabling the Azure setup in Deltek Touch, Deltek recommends to test Azure in the Workspace Client. For more information, see the *Deltek Maconomy Azure SSO Guide*.

Update the Maconomy Azure Application

The Deltek Touch Web and Native applications use the same Azure application as the Workspace Client. If you follow the Maconomy documentation for Azure, this Azure Web app is called Maconomy.

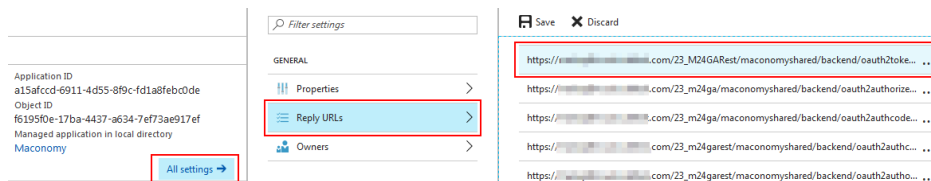
To make sure Deltek Touch can use the Maconomy Azure application, add the Touch URL to the Reply URL on the Azure application.

To add the Touch URL to the Reply URL:

1. Open AAD in the Azure management portal.
2. Click the **App registrations** tab.
3. On the **App registrations** tab, find the Maconomy application.



4. Click **All Settings » Reply URLs**.



5. Add the Touch URL as follows:
 - [.../maconomyshared/backend/oauth2authorizereturn.php](#) (for example, https://<yourdomain>.com/22_M20SP1/maconomyshared/backend/oauth2authorizereturn.php) – This is for Azure OpenID, for the Touch Web application.
 - [.../maconomyshared/backend/oauth2authcodereurn.php](#) – This is for the Azure OpenID, for Touch native application, needed if REST_USESF = "true"
 - [.../maconomyshared/backend/oauth2authcodereurn_iab.php](#) – This is for the Azure OpenID, for Touch native application, needed if REST_USESF = "false"

Enable Azure Login in the Touch Server

The following changes are needed in the configuration.ini (or tenant.ini) file:

1. Set **REST_USEEXTERNALCREDENTIALS="true"**. By default, it is set to **"false"**.
2. Set **REST_EXTERNALCREDENTIALSTYPE="Azure"**. By default, it is set to **""**.
3. Make sure **REST_USESF** has the desired value. By default, it is set to **"true"**. For details see [REST_USESF Example](#).

OneLogin Setup

Register a OneLogin Application

To make sure that Deltek Touch can use the Maconomy OneLogin application, add the Touch URL to the **Redirect URI's** field in the OneLogin application.

To add the Touch URL to the Redirect URI:

1. Open the OneLogin management portal.
2. Tap the **Apps** tab.
3. On the **Apps tab**, select the Maconomy application.
4. Tap **Configuration**.
5. In the **Redirect URI's** field, add the below Touch URL:
 - a. Using the format `<yourTouchURL>/maconomyshared/backend/oauth2authcodereturn.php`. For example, <https://mactouchcph2.deltek.com/DeltekMaconomyTouchTime/maconomyshared/backend/oauth2authcodereturn.php>. Needed for the native app, if REST_USESF = "true".
 - b. Using the format `<yourTouchURL>/maconomyshared/backend/oauth2authcodereturn_iab.php`. For example, https://mactouchcph2.deltek.com/DeltekMaconomyTouchTime/maconomyshared/backend/oauth2authcodereturn_iab.php. Needed for the native app, if REST_USESF = "false".

Enable OneLogin in the Touch Server

The following changes are needed in the configuration.ini (or tenant.ini) file:

1. Set **REST_USEEXTERNALCREDENTIALS="true"**. By default, it is set to **"false"**.
2. Set **REST_EXTERNALCREDENTIALSTYPE="OneLogin"**. By default, it is set to **""**.
3. Make sure **REST_USESF** has the desired value. By default, it is set to **"true"**. For details see [REST_USESF Example](#).

Attention: For more information on the OneLogin setup, see the *Deltek Maconomy System Administrator Guide*.

Okta Setup

Note: This functionality is available in REST Touch on Maconomy 2.4.7 and 2.5, and succeeding versions. You can log in with Okta on your iOS and Android native applications, and Chrome and Safari web applications.

When you are using Maconomy 2.4.7, 2.5.1 or later versions, enable Okta in the Maconomy Core product. However, when you are using the Maconomy 2.5 version, install the 2.5 C.U. 11 patch prior to enabling Okta in the Maconomy Core product.

Register an Okta Application

When you add the Touch URL to the **Redirect URI's** field in the Okta application, you enable the integration of Deltek Touch with the Maconomy Okta application.

To add the Touch URL to the Redirect URI:

1. Open the Okta management portal.

2. Tap the **Apps** tab.
3. On the **Apps** tab, select the Maconomy application.
4. Tap **Configuration**.
6. In the **Redirect URI's** field, add the below Touch URL:
 - a. Using the format
 <yourTouchURL>/maconomyshared/backend/oauth2authcodereturn.php. For example,
<https://mactouchcph2.deltek.com/DeltekMaconomyTouchTime/maconomyshared/backend/oauth2authcodereturn.php>.
 Needed for the native app, if REST_USESF = "true"
 - b. Using the format
 <yourTouchURL>/maconomyshared/backend/oauth2authcodereturn_iab.php. For example,
https://mactouchcph2.deltek.com/DeltekMaconomyTouchTime/maconomyshared/backend/oauth2authcodereturn_iab.php.
 Needed for the native app, if REST_USESF = "false".

Enable Okta in the Touch Server

The following changes are needed in the configuration.ini (or tenant.ini) file:

1. Set **REST_USEEXTERNALCREDENTIALS="true"**. By default, it is set to **"false"**.
2. Set **REST_EXTERNALCREDENTIALSTYPE="Okta"**. By default, it is set to **""**.
3. Make sure **REST_USESF** has the desired value. By default, it is set to **"true"**. For details, see [REST USESF Example](#).

OpenID Connect (OIDC) Setup

In addition to Azure, OneLogin, and Okta, Touch generically supports other OIDC login providers.

Note: This functionality is available in REST Touch on Maconomy 2.4.7 and 2.5, and succeeding versions. You can log in using your OIDC provider on your iOS and Android native applications, and Chrome and Safari web applications.

When you are using Maconomy 2.4.7, 2.5.1 or later versions, enable OIDC in the Maconomy Core product. However, when you are using the Maconomy 2.5 version, install the 2.5 C.U. 9 patch prior to enabling OIDC in the Maconomy Core product.

Attention: When you log in the Touch app using your OIDC credentials, you might have to enter your username both on the Touch Login screen, and on the OIDC Login screen.

Register OIDC

When you add the Touch URL to the **Redirect URI's** field in the OIDC application, you enable the integration of Deltek Touch with the OIDC application.

To add the Touch URL to the Redirect URI:

1. Open the OIDC management portal.

2. Tap the **Apps** tab.
3. On the **Apps** tab, select the Maconomy application.
4. Tap **Configuration**.
7. In the **Redirect URI's** field, add the below Touch URL:
 - a. Using the format
 <yourTouchURL>/maconomyshared/backend/oauth2authcodereturn.php. For example,
<https://mactouchcph2.deltek.com/DeltekMaconomyTouchTime/maconomyshared/backend/oauth2authcodereturn.php>. Needed for the native app, if REST_USESF = "true".
 - b. Using the format
 <yourTouchURL>/maconomyshared/backend/oauth2authcodereturn_iab.php. For example,
https://mactouchcph2.deltek.com/DeltekMaconomyTouchTime/maconomyshared/backend/oauth2authcodereturn_iab.php. Needed for the native app, if REST_USESF = "false".

Enable OIDC in the Touch Server

The following changes are needed in the configuration.ini (or tenant.ini) file:

1. Set **REST_USEEXTERNALCREDENTIALS="true"**. By default, it is set to **"false"**.
2. Enter a specific description for **REST_EXTERNALCREDENTIALSTYPE**. For example, use **REST_EXTERNALCREDENTIALSTYPE="My OIDC Login Type"**, where the string you specified becomes the toggle switch label displayed on the **Login** screen.
3. Make sure **REST_USESF** has the desired value. By default, it is set to **"true"**. For details, see [REST_USESF Example](#).

UPGRADE

Upgrade Overview

This section includes the steps a Deltek consultant needs to accomplish to upgrade the Deltek Touch system to the latest version.

Note: End users need to upgrade the native application to the latest version by downloading Deltek Touch from the *Apple App Store* or *Google Play Store* depending on the operating system of their devices.

Prerequisites

Prerequisites for Maconomy

You need to have **Maconomy 2.6.4 (or later)** to upgrade the Touch backend to version 4.4. If you have an earlier Maconomy version, you cannot upgrade to this Touch backend.

The Maconomy RESTful web service needs to be enabled, inclusive of the containers version 1.

Prerequisites for the Touch Server

If the Touch Server is installed on a Windows machine using Apache as a web server, and your Maconomy version is 2.3 (or later), you need to upgrade to Apache 2.4.

Note: The Maconomy web server is certified for Apache 2.0 and 2.2. The Touch server must run on Apache 2.4.

If the Touch Server is installed on a Linux machine, see the [Deltek Touch Installation on Linux Server](#) section in this document.

Install the Touch Server

Use the Touch Installer to install the Touch server and web application.

Since Touch is bundled with a specific Maconomy release, Touch Server 4.4 is available in DSM for Maconomy 2.6.4 and 2.6.5 only.

You can access the following files in DSM under the corresponding Maconomy release:

- On Windows, run **DeltekTouchMaconomy44.exe** to launch the installation program.
- On Linux, run **DeltekTouchMaconomyLinux44.tar** to launch the installation program.

Install the Touch Web Service

Install the Maconomy 2.6.4 or 2.6.5 APU to install the Touch web service automatically.

To check if you have the correct web service version, open Deltek Touch and go to **Settings » About » Web Service**. Your web service version should be **4.4.0.1.22**.

Update Touch Customizations

If you changed the standard settings and/or standard layouts, you have customizations. **Ensure that your custom files are updated.**

If you are upgrading from Maconomy 2.5.4 (or earlier):

To check if there are any customizations, search for the **MaconomyMScript** folder on the Maconomy web server. The folder must contain a Standard sub-folder which includes all standard layouts and settings. If there is a Custom sub-folder in the **MaconomyMScript** folder, it means that you likely have customizations.

Alternatively, check Extender for Touch customizations.

If you have Touch customizations in .I files, and you are upgrading to Maconomy be 2.6 (or later) / Touch 4.0 (or later), **you need to redo the customizations in .JSON files**. Starting with Maconomy 2.6, Touch uses a REST-based API (with .JSON files) and no longer uses MScript-based API (with .I files).

See the Rewrite Customizations in REST section in the *Deltek Touch Layout Configuration Guide*.

If you are upgrading from Maconomy 2.6:

Two server settings are added and various layouts are changed. For details, see the What's New section in the *Deltek Touch 4.4 for Maconomy 2.6.4 (or 2.6.5) Layout Configuration Guide*.

Upgrade FAQs

This section includes frequently asked questions about Deltek Touch.

Which Maconomy version is the current Touch version available for?

Starting with Touch 3.0, we are bundling Touch with a specific Maconomy release. Therefore, the fully compatible setup for Touch 4.4 is possible for **Maconomy 2.6.4 or 2.6.5** only.

If you are using the above-stated Maconomy version, after completing the steps in the previous section, you should now have a fully compatible Touch setup including:

Android Application	iOS Application	Web Application	Touch Server	Web Service	Maconomy
4.4	4.4	4.4	4.4	4.4.0.1.22	2.6.4 or 2.6.5

How about other Maconomy versions?

Other Maconomy versions that were supported by Touch previously have a partially compatible Touch setup, including the Touch 4.0 iOS and Android application, earlier Touch server, web service, and web application. These versions can use the new native applications, but cannot get the new backend software (Touch server, web service, and web application).

What changed in the latest version compared to the previous Touch version?

The following table summarizes the changes made to two succeeding versions. For example, changes made to Touch version 4.0 compared to 3.8.

Touch Version	Touch Installer	Touch Server	Web Service	Android Native App	iOS Native App	Web App
4.3	✓	✓	✓	✓	✓	✓
4.2	✓	✓	✓	✓	✓	✓
4.1.3	✓	✓	✓	✓	✓	✓
4.1	✓	✓	✓	✓	✓	✓
4.0	✓	✓	✓	✓	✓	✓
3.8	✓	✓	✓	✓	✓	✓
3.7	✓	✓	✓	✓	✓	✓
3.6	✓	✓	✓	✓	✓	✓
3.5	✓	✓	✓	✓	✓	✓

Touch Version	Touch Installer	Touch Server	Web Service	Android Native App	iOS Native App	Web App
3.4	✓	✓	✓	✓	✓	✓
3.3	✓	✓	✓	✓	✓	✓
3.2	✓	✓	✓	✓	✓	✓
3.1	✓	✓	✓	✓	✓	✓
3.0	✓	✓	✓	✓	✓	✓
2.3.2				✓	✓	
2.3.1				✓	✓	
2.3	✓	✓	✓	✓	✓	✓

What is the Touch web service version for my Maconomy?

To check your current web service version, open Deltek Touch and go to **Settings » About » Web Service**.

Deltek recommends the following Touch web service versions:

Maconomy Version	Touch Web Service Version
Maconomy 2.6.5	4.4.0.1.22
Maconomy 2.6.4	4.4.0.1.22
Maconomy 2.6.3	4.3.0.1.22
Maconomy 2.6.2	4.2.0.1.22
Maconomy 2.6.1	4.1.0.10.22
Maconomy 2.6	4.0.0.19.22
Maconomy 2.5.5	3.8.0.13.21
Maconomy 2.5.4	3.8.0.12.21
Maconomy 2.5.3	3.7.0.13.21
Maconomy 2.5.2	3.6.0.11.21
Maconomy 2.5.1	3.5.0.36.21

Maconomy Version	Touch Web Service Version
Maconomy 2.5	3.4.0.16.21
Maconomy 2.4 (<i>no longer supported</i>)	3.3.0.4.20
Maconomy 2.3 (<i>no longer supported</i>)	3.1.0.4.19
Maconomy 2.2 (<i>no longer supported</i>)	3.0.0.14.17
Maconomy 2.1 (<i>no longer supported</i>)	3.0.0.9.16
Maconomy 2.0 (<i>no longer supported</i>)	2.3.0.8.15
Maconomy X1 (<i>no longer supported</i>)	2.3.0.6.12

How do I install earlier Touch web services?

Starting with Touch 3.1 and Maconomy 2.4.3, the Touch web service is included in the Maconomy APU.

For earlier Maconomy and/or Touch backend, the Touch web service was installed mostly via Hot Fix (FPU), as follows:

Maconomy Version	Touch Web Service Version
2.6, 2.6.1, 2.6.2, 2.6.3	APU
2.5, 2.5.1, 2.5.2, 2.5.3, 2.5.4, 2.5.5	APU
2.4.3, 2.4.4, 2.4.5, 2.4.6, 2.4.7, 2.4.8 (<i>no longer supported</i>)	APU
2.4 GA, 2.4.1, 2.4.2 (<i>no longer supported</i>)	fpu.w2000.touchapi_2_3_0_0.zip
2.3.4 (<i>no longer supported</i>)	APU
2.3 GA, 2.3.1, 2.3.2, 2.3.3 (<i>no longer supported</i>)	fpu.w1900.touchapi_2_3_0_0.zip
2.2.6 (<i>no longer supported</i>)	fpu.w1700.touchapi_3_0_0_0.zip
2.2, 2.2.1, 2.2.3, 2.2.4, 2.2.5 (<i>no longer supported</i>)	fpu.w1700.touchapi_2_3_0_0.zip
2.1.8 (<i>no longer supported</i>)	fpu.w1600.touchapi_3_0_0_0.zip
2.1.1, 2.1.2, 2.1.3, 2.1.4, 2.1.5, 2.1.6, 2.1.7 (<i>no longer supported</i>)	fpu.w1600.touchapi_2_3_0_0.zip
2.0 (<i>no longer supported</i>)	fpu.w1500.touchapi_2_3_0_0.zip
X1 Service Packs 25, 26, 27, 28 and 29 (<i>no longer supported</i>)	fpu.w1200.touchapi_2_3_0_0.zip

If your Maconomy version is not listed in the table or it is listed as no longer supported, you need to upgrade Maconomy to any of the above-mentioned supported versions first because Deltek Touch does not support your current Maconomy version.

For all supported Maconomy versions, the Touch web service is installed as part of the Maconomy APU installation.

Which Maconomy version can I install a given Touch version on?

The below table illustrates on which Maconomy version can you install a given Touch version (Touch server):

Touch Backend	Maconomy Version
Touch 4.4	Maconomy 2.6.4 or 2.6.5
Touch 4.3	Maconomy 2.6.3
Touch 4.2	Maconomy 2.6.2
Touch 4.1.3	Maconomy 2.6.1
Touch 4.0	Maconomy 2.6
Touch 3.8.1	Maconomy 2.5.5
Touch 3.8	Maconomy 2.5.4
Touch 3.7	Maconomy 2.4.8 and 2.5.3
Touch 3.6	Maconomy 2.5.2
Touch 3.5	Maconomy 2.4.7 and 2.5.1
Touch 3.4	Maconomy 2.4.6 and 2.5
Touch 3.3 (<i>no longer supported</i>)	Maconomy 2.4.5
Touch 3.2 (<i>no longer supported</i>)	Maconomy 2.4.4
Touch 3.1 (<i>no longer supported</i>)	Maconomy 2.4.3 and 2.3.4
Touch 2.3 (<i>no longer supported</i>)	All previous Maconomy versions

MULTITENANCY SETUP

Multitenancy Setup Overview

This section provides instructions on how to set up multitenancy in Deltek Touch. Multitenancy is only supported in Internet Information Services (IIS), and not Apache.

Before you install Deltek Touch, install the following prerequisite software:

Software Name	Suggested Installation Link
Microsoft IIS URL Rewrite 2.1	http://www.iis.net/downloads/microsoft/url-rewrite
Microsoft IIS Application Request Routing	http://www.iis.net/downloads/microsoft/application-request-routing

Attention: Make sure you understand the role of new parameters introduced in the configuration.ini file of Deltek Touch. For more information, see the [configuration.ini](#) section in this document.

Install Multitenant Touch Server

This section describes how to install and enable a single-version (for example, Touch 4.0) multitenant system using the IIS manager.

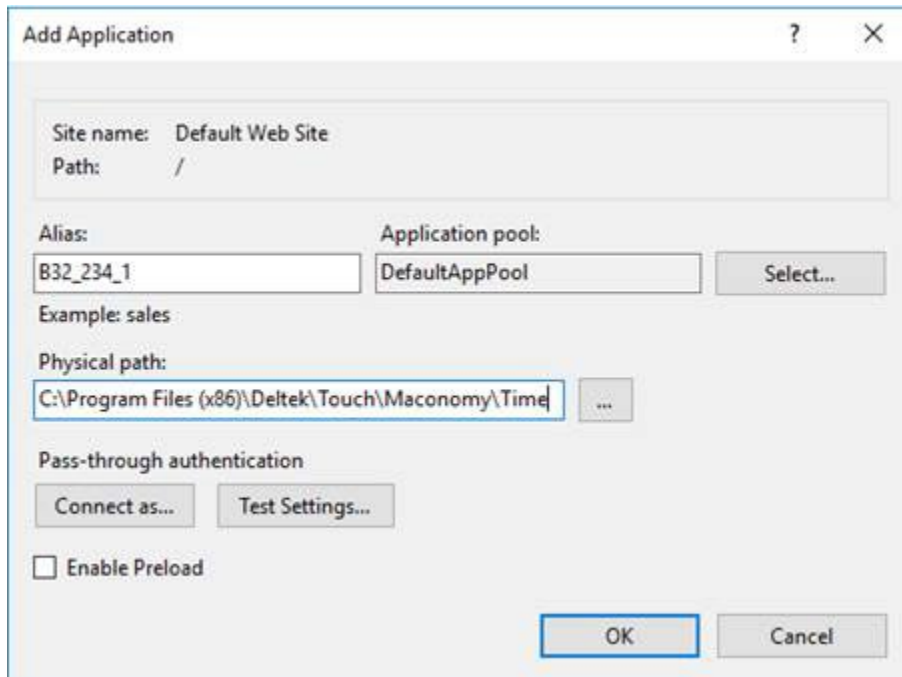
Note: You can also install multiple versions of Touch on the same multitenant Touch server. For more information, see the [Upgrade Multitenant Touch Server](#) section in this document.

To install and enable a single-version multitenancy setup in Touch:

1. Install Deltek Touch.

Note: For more information, see the [Installation](#) section in this document.

2. Make sure to add the application(s) to a site using the Add Application dialog box on the IIS manager. The following screenshot displays a sample application:



Note: The **Alias** field displays the application name. The **Physical path** field refers to the Touch installation directory pointing to the Time folder. You can create as many systems as need. For example, you can create three IIS applications:

- <https://touch.company.com/Customer1>
- <https://touch.company.com/Customer2>
- <https://touch.company.com/Customer3>

3. Make sure the RESTful Web service is available and accessible by Deltek Touch.

4. Make sure you have all the required connection details to the RESTful Web service (for example, the database name of REST, and IP address of the REST API for containers and filedrop).
5. Set up the proxy server.

Note: For more information, see the [Set Up the Proxy Server](#) section in this document.

6. Set up the configuration.ini file.

Note: For more information, see the [Set Up the configuration.ini File](#) section in this document.

7. Set up the core configuration.ini file.

Note: For more information, see the [Core configuration.ini File](#) section in this document.

8. Set up the tenant configuration.ini file.

Note: For more information, see the [Tenant configuration.ini File](#) section in this document.

9. Perform the file naming for the configuration.ini file.

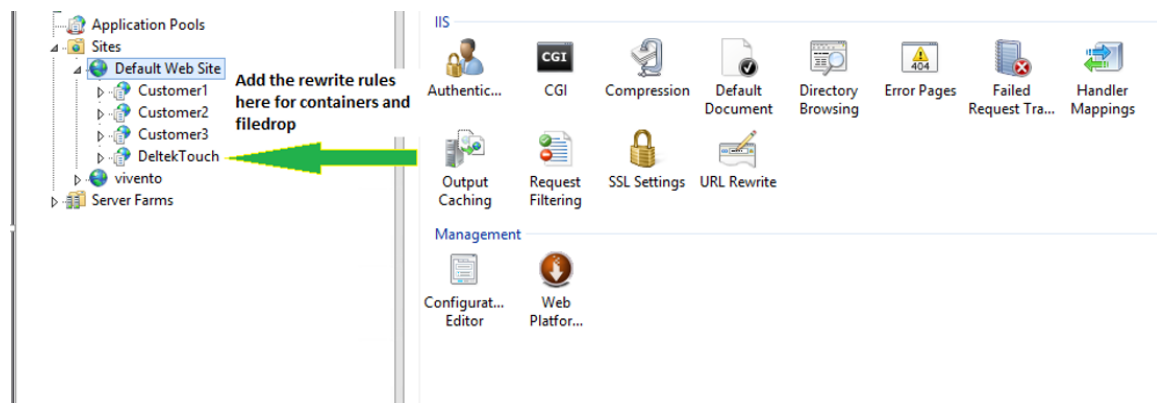
Note: For more information, see the [Create File Name for the configuration.ini File](#) section in this document.

Set Up the Proxy Server

To perform the proxy server setup:

1. Add the rewrite rules for the proxy in the IIS manager. Click the website where you want to define the rewrite rules.

Deltek recommends that rules must be added to the local site (for example, DeltekTouch), and not to the root site (for example, Default Web Site).



2. Click the **URL Rewrite** applet.
3. Add the below rewrite rules for a specific client:

- a. Containers
 - b. Filedrop
 - c. Auth
 - d. Maconomy-API
 - e. Logging
 - f. UnencodedURL
4. Restart the IIS Manager.

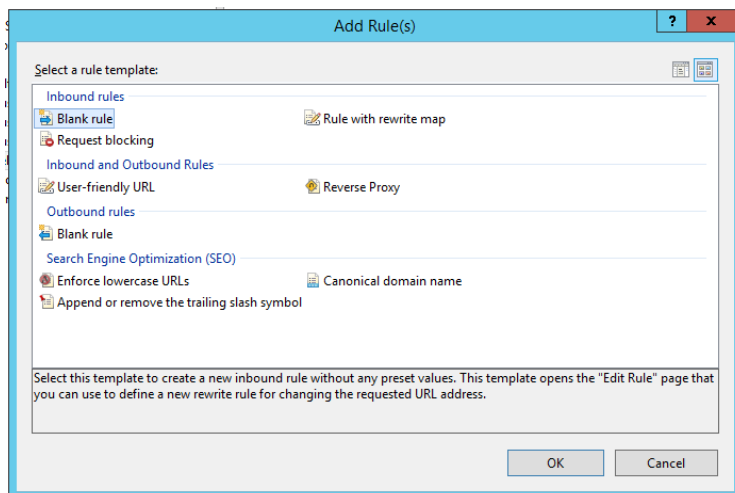
Add Rewrite Rules

Use these steps to add the rewrite rules in IIS for the proxy server for Maconomy RESTful web service.

Containers REST API

To add rules to the container API:

1. Open the **URL Rewrite** applet.
2. In the Actions pane, click **Add Rule(s)**.
3. On the Add Rule(s) dialog box, select the **Blank Rule** option in the **Inbound rules** section.



4. Click **OK**.
5. On the Edit Inbound Rules window, enter or select the appropriate values:

Edit Inbound Rule

Match URL

Requested URL: Matches the Pattern Using: Wildcards

Pattern: Test pattern...

☒ Ignore case

Conditions

Server Variables

Action

Action type: Rewrite

Action Properties

Rewrite URL:

☒ Append query string

☐ Log rewritten URL

☐ Stop processing of subsequent rules

- **Name:** Set the rule name (for example, Customer1Containers).
- **Requested URL:** Select the **Matches the Pattern** option.
- **Using:** Select the **Wildcards** option.
- **Pattern:** Enter the pattern, **customer1/containers/(.*)**.
- **Ignore case:** Select this option.
- **Conditions:** Do not change anything.
- **Server Variables:** Add the HTTP_X_FORWARDED_PROTO with an https value if the Touch server is setup with **https**. Otherwise, use **http**. Check **Replace the existing value**.
- **Action**
 - **Action type:** Select the **Rewrite** option.
 - **Action Properties**
 - **Rewrite URL:** Enter the URL for the RESTful API. For example, **http://10.1.1.111:1111/containers/{R:1}**.
 - **Append query string:** Select this option.
 - **Log rewritten URL:** Do not select this option.
- **Stop processing of subsequent rules:** Do not select this option.

6. On the right pane, click **Apply**.

Filedrop REST API

To add the rules to the filedrop REST API:

1. Open the **URL Rewrite** applet.
2. In the Actions pane, click **Add Rule(s)**.
3. On the Add Rule(s) dialog box, select the **Blank Rule** option in the **Inbound rules** section.
4. Click **OK**.
5. On the Edit Inbound Rules window, enter or select the appropriate values:
 - **Name:** Set the rule name (for example, Filedrop).
 - **Requested URL:** Select the **Matches the Pattern** option.
 - **Using:** Select the **Wildcards** option.
 - **Pattern:** Enter the pattern. For example, **customer1/filedrop/(.*)**.
 - **Ignore case:** Select this option.
 - **Conditions:** Do not change anything.
 - **Server Variables:** Add the HTTP_X_FORWARDED_PROTO with an **https** value if the Touch server is setup with https. Otherwise, use **http**. Check **Replace the existing value**.
 - **Action**
 - **Action type:** Select the **Rewrite** option.
 - **Action Properties**
 - **Rewrite URL:** Enter the URL for the RESTful API. For example, **http://10.1.1.111:1111/filedrop/{R:1}**.
 - **Append query string:** Select this option.
 - **Log rewritten URL:** Do not select this option.
 - **Stop processing of subsequent rules:** Do not select this option.
6. On the right pane, click **Apply**.

Auth REST API

To add the rules to the auth REST API:

1. Open the **URL Rewrite** applet.
2. In the Actions pane, click **Add Rule(s)**.
3. On the Add Rule(s) dialog box, select the **Blank Rule** option in the **Inbound rules** section.
4. Click **OK**.
5. On the Edit Inbound Rules window, enter or select the appropriate values:
 - **Name:** Set the rule name (for example, Auth).
 - **Requested URL:** Select the **Matches the Pattern** option.
 - **Using:** Select the **Wildcards** option.

- **Pattern:** Enter the pattern. For example, **customer1/auth/(.*)**.
 - **Ignore case:** Select this option.
 - **Conditions:** Do not change anything.
 - **Server Variables:** Add the HTTP_X_FORWARDED_PROTO with an **https** value if the Touch server is setup with https. Otherwise, use **http**. Check **Replace the existing value**.
 - **Action**
 - **Action type:** Select the **Rewrite** option.
 - **Action Properties**
 - **Rewrite URL:** Enter the URL for the RESTful API. For example, **http://10.1.1.111:1111/auth/{R:1}**.
 - **Append query string:** Select this option.
 - **Log rewritten URL:** Do not select this option.
 - **Stop processing of subsequent rules:** Do not select this option.
6. On the right pane, click **Apply**.

Maconomy-API

To add the rules to the Maconomy-API:

1. Open the **URL Rewrite** applet.
2. In the Actions pane, click **Add Rule(s)**.
3. On the Add Rule(s) dialog box, select the **Blank Rule** option in the **Inbound rules** section.
4. Click **OK**.
5. On the Edit Inbound Rules window, enter or select the appropriate values:
 - **Name:** Set the rule name (for example, Maconomy-API).
 - **Requested URL:** Select the **Matches the Pattern** option.
 - **Using:** Select the **Wildcards** option.
 - **Pattern:** Enter the pattern. For example, **customer1/maconomy-api(.*)** .
 - **Ignore case:** Select this option.
 - **Conditions:** Do not change anything.
 - **Server Variables:** Add the HTTP_X_FORWARDED_PROTO with an **https** value if the Touch server is setup with https. Otherwise, use **http**. Check **Replace the existing value**.
 - **Action**
 - **Action type:** Select the **Rewrite** option.
 - **Action Properties**
 - **Rewrite URL:** Enter the URL for the RESTful API. For example, **http://10.1.1.111:1111{R:1}**.
 - **Append query string:** Select this option.
 - **Log rewritten URL:** Do not select this option.

- **Stop processing of subsequent rules:** Do not select this option.
6. On the right pane, click **Apply**.

Logging REST API

To add the rules to the logging REST API:

1. Open the **URL Rewrite** applet.
2. In the Actions pane, click **Add Rule(s)**.
3. On the Add Rule(s) dialog box, select the **Blank Rule** option in the **Inbound rules** section.
4. Click **OK**.
5. On the Edit Inbound Rules window, enter or select the appropriate values:
 - **Name:** Set the rule name (for example, Logging).
 - **Requested URL:** Select the **Matches the Pattern** option.
 - **Using:** Select the **Wildcards** option.
 - **Pattern:** Enter the pattern. For example, **customer1/logging/(.*)**.
 - **Ignore case:** Select this option.
 - **Conditions:** Do not change anything.
 - **Server Variables:** Add the HTTP_X_FORWARDED_PROTO with an **https** value if the Touch server is setup with https. Otherwise, use **http**. Check **Replace the existing value**.
 - **Action**
 - **Action type:** Select the **Rewrite** option.
 - **Action Properties**
 - **Rewrite URL:** Enter the URL for the RESTful API. For example, **http://10.1.1.111:1111/logging/{R:1}**.
 - **Append query string:** Select this option.
 - **Log rewritten URL:** Do not select this option.
 - **Stop processing of subsequent rules:** Do not select this option.
6. On the right pane, click **Apply**.

UnencodedURLRule API

To add the rules to the UnencodedURLRule API:

1. Open the **URL Rewrite** applet.
2. In the Actions pane, click **Add Rule(s)**.
3. On the Add Rule(s) dialog box, select the **Blank Rule** option in the **Inbound rules** section.
4. Click **OK**.
5. On the Edit Inbound Rules window, enter or select the appropriate values:
 - **Name:** Set the rule name (for example, UnencodedURL).

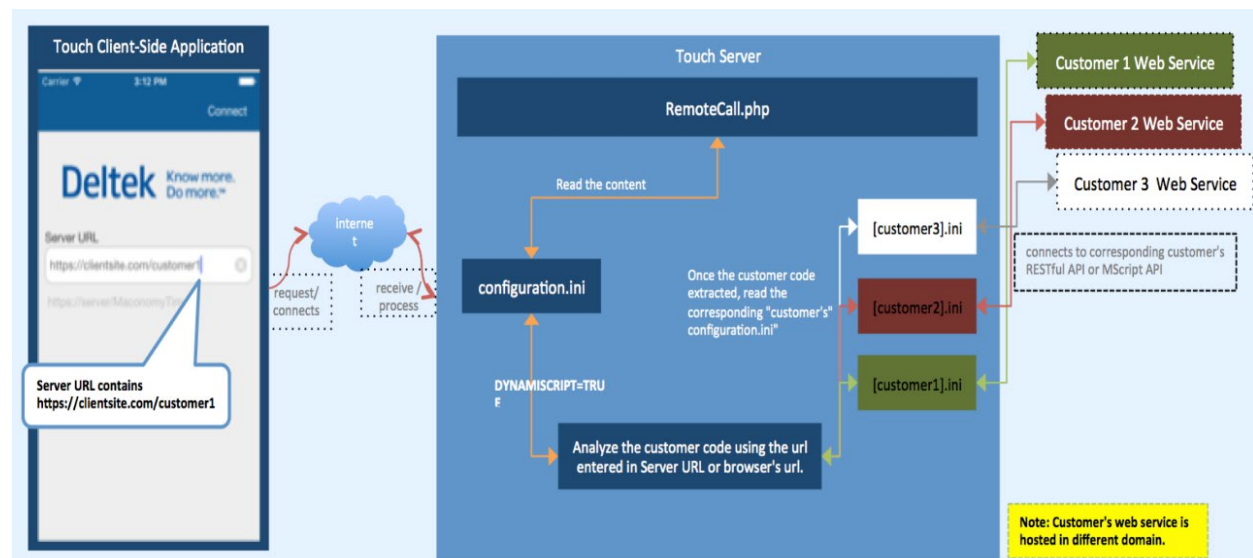
- **Requested URL:** Select the **Matches the Pattern** option.
 - **Using:** Select the **Wildcards** option.
 - **Pattern:** Enter the pattern. For example, **customer1/containers/*.***
 - **Ignore case:** Select this option.
 - **Conditions:** Do not change anything.
 - **Server Variables:** Add the HTTP_X_FORWARDED_PROTO with an **https** value if the Touch server is setup with https. Otherwise, use **http**. Check **Replace the existing value**.
 - **Action**
 - **Action type:** Select the **Rewrite** option.
 - **Action Properties**
 - **Rewrite URL:** Enter "{UNENCODED_URL}".
 - **Append query string:** Do not select this option.
 - **Log rewritten URL:** Do not select this option.
 - **Stop processing of subsequent rules:** Do not select this option.
6. On the right pane, click **Apply**.

Set Up the configuration.ini File

There are two types of configuration.ini file needed when setting up the multitenancy for Deltek Touch: one "core" configuration.ini and individual tenant's configuration.ini (which resides in the configuration folder of the Touch Server).

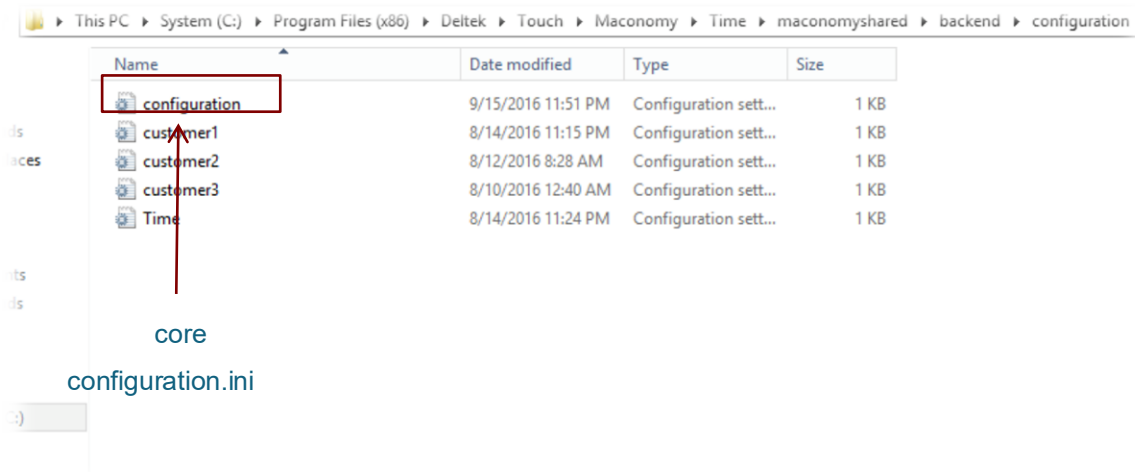
Core configuration.ini File

The core configuration.ini file does not contain the connection details of the RESTful Web service that users need. It only contains the information whether this is a multitenant environment.



In the Touch client-side application, setting the value of the **Server URL** field and tapping **Connect** instructs Deltek Touch to connect to the Touch Server. When the Touch Server receives the request from Deltek Touch, it performs the following actions:

- Retrieves the configuration.ini file by calling certain methods in the “RemoteCall.php.”
- Checks the DYNAMICSCRIPT parameter. If it is set to true, multitenancy is enabled.
- If the DYNAMICSCRIPT parameter is **true**, the “RemoteCall.php” analyzes the value entered in the **Server URL** field whether the user is connecting via native application or the “URL” or connecting via browser. The tenant code extracted by the “RemoteCall.php” is dependent on the URL. For example, in the URL **http://clientsite.com/customer1**, the Touch server looks for customer1.ini (which contains the connection details for the web service) in the Touch server.



Sample Content of the Core configuration.ini File

```
; *****
; Maconomy Touch Configuration File
; *****

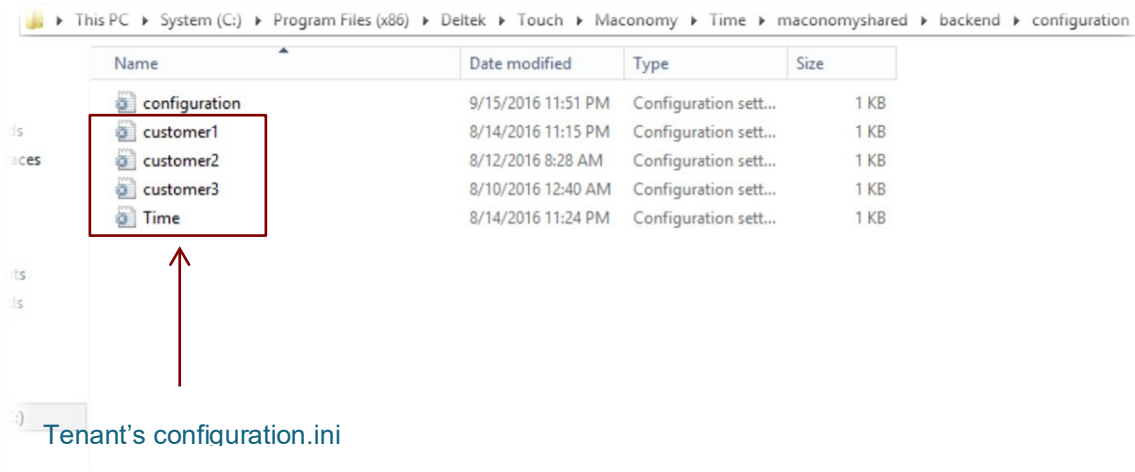
[SERVER_DATA]
DYNAMICSCRIPT="TRUE"
TOUCHSERVER="4.0.0.0"
```

Tenant configuration.ini File

After setting up the core configuration.ini file, create each specific tenant configuration.ini. The tenant configuration.ini contains the connection details about the Web service that Touch client-side application needs.

Note: The tenant configuration.ini resides in the configuration folder of the Touch server along with the core configuration.ini.

Install Multitenant Touch Server



Sample Content of the Tenant configuration.ini File

```
; *****
; Maconomy Touch Configuration File
; *****

[SERVER_DATA]
DYNAMICSCRIPT='false'
DEBUGGERFL="false"
TOUCHSERVERVER="4.0.0.0"
HELPODOCURL = 'https://help.deltek.com/product/Maconomy/Mobile/'
CLIENTURL='https://clientsite.com/224SSO'

[REST_LOGIN_SETUP]
REST_USEEXTERNALCREDENTIALS="false"
REST_ALLOWMACONOMYLOGINWHENUSINGEXTERNALCREDENTIALS="false"
REST_EXTERNALCREDENTIALSTYPE=""

[REST_PROXY_DATA]
REST_HTTP_PROTOCOL="https"
REST_DOMAIN_NAME="clientdomain.com"
REST_HTTP_PORT=""
REST_PROXYPASS_CLIENT_CODE="224SSO"
REST_CONTAINER_NAME="containers"
REST_FILEDROP_NAME="filedrop"
REST_VERSION="v1"
REST_DATABASE="x1db"
REST_LANGUAGE="en_US_CPA"
```

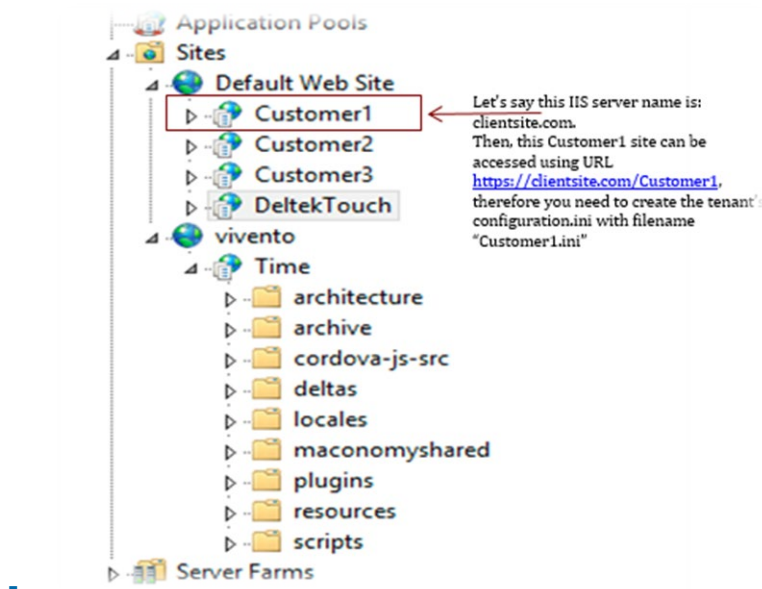
Install Multitenant Touch Server

```
REST_IIS_TOUCH_FOLDER_NAME="MacTouchMulti"
REST_AUTHENTICATION_TYPE="BASICAUTH"
REST_LOGGING_ENABLED="false"
REST_LOGGING_NAME="logging"
REST_MACONOMY_API="maconomy_api"
```

Create File Name for the configuration.ini File

Observe the following guidelines in creating a file name for the configuration.ini file:

- The file name for the core configuration.ini is always "configuration.ini" and resides in the configuration folder (for example, /time/maconomyshared/backend/configuration).
- The file name for the tenant configuration.ini is always dependent on the website name. For example, the "customer 1" website name is "Customer1" and the website setup for this customer1 can be accessed using the URL <http://samplesite.com/Customer1>. This means you need to create the tenant's configuration.ini with file name of "Customer1.ini".



Upgrade a Multitenant Touch Server

This section describes how to upgrade a multitenant Touch server.

Upgrade All Tenants

This procedure allows you to upgrade all tenants on a single-version multitenant Touch server to another Touch version.

Example: You currently have a Touch 3.1 installation shared by several customers. All customers would like to use Touch 3.2.

To upgrade all tenants:

1. Run the Touch Installer for the specific Touch version you want to install (for example, Touch 3.2).

Note: For more information, see the [Installation](#) section in this document. If you are on Touch 3.8 (or earlier), see the Delttek Touch for Maconomy Installation Guide of the version you want to install.

2. After installing the specific version of Touch, update the tenant configuration.ini file manually. You should apply changes in the configuration.ini to the tenant configuration.ini.

Note: For more information, see the [Set Up the configuration.ini File](#) section in this document.

Upgrade One Tenant

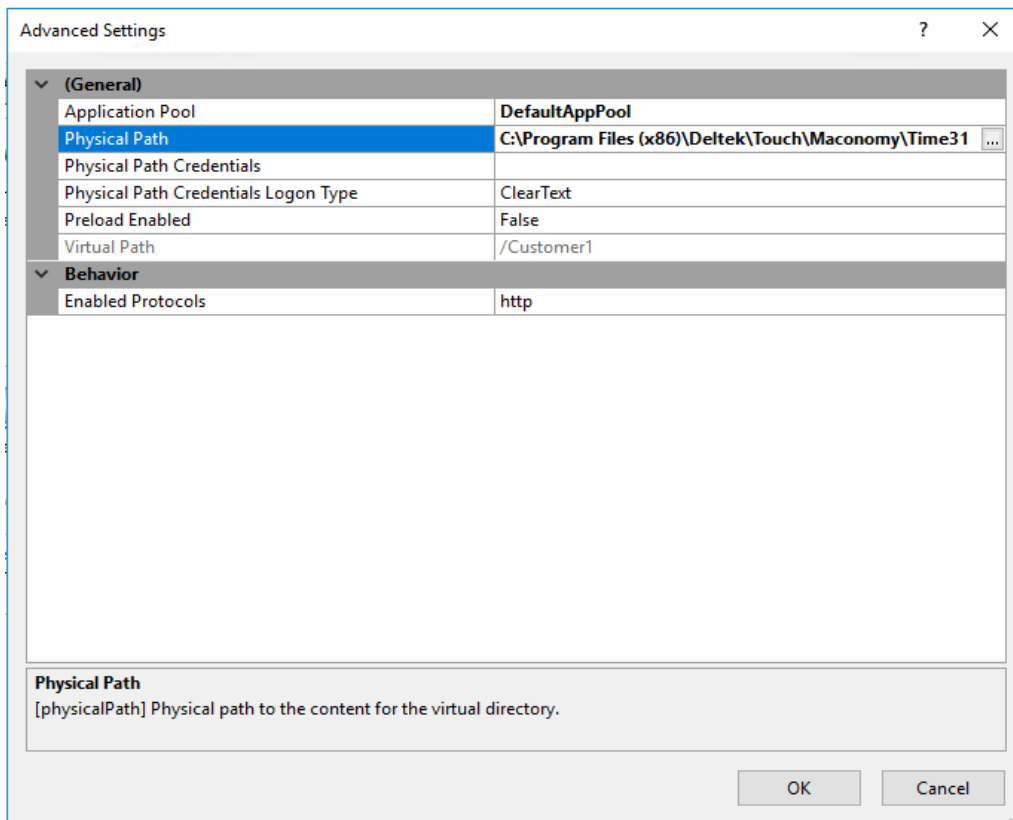
This procedure allows you to install another Touch version in one (or more) tenant on a multitenant Touch server.

Example: You currently have a Touch 3.1 installation shared by several customers. One (or more) customers would like to use Touch 3.2, while other customers prefer to stay on Touch 3.1.

To upgrade one tenant:

1. In the Touch Installation folder, copy and paste the current Time folder and rename it "Time<Version>" (for example, Time31). There are now two Time folders in the same folder:
 - Time (This will be used by customers who want to move to 3.2.)
 - Time31 (This will be used by customers who want to stay on 3.1.)
2. Modify the IIS applications you want to stay on Touch 3.1.

Right-click the IIS application, then click **Manage Application » Advanced Settings**.



3. Upgrade Touch.

- a. Rename the current configuration.ini file in the Time folder to “configuration – dynamic.ini.”
- b. Rename the “backup configuration.ini” to “configuration.ini.”
- c. Run the installer of the Touch version you want to install (for example, Touch 3.2). Follow the instructions to install Touch. After installation, the Time folder is updated to Touch 3.2, while Time31 remains unchanged (stays as Touch 3.1).
- d. Modify the configuration.ini file for the Time folder (Touch 3.2).

```
; *****
; Maconomy Touch Configuration File
; *****

[SERVER_DATA]
DYNAMICSCRIPT="true"
TOUCHSERVERVER="3.2.0.0"
```

- e. Modify the tenant configuration.ini file to mimic the configuration.ini changes from the Touch 3.2 installation.

You now have a Touch server supporting Touch 3.1 and 3.2. If you want to move customers from one Touch version to another, you only need to change the IIS application physical path to the right Touch installation folder.

APPENDICES

Appendix A: Localization

Most translations in Deltek Touch for Maconomy are using the dictionaries in Maconomy core product.

By default, Deltek Touch for Maconomy 2.4.5 and later come in the following languages:

- English
- Danish
- Dutch
- Chinese (Simplified)
- French
- German
- Italian
- Norwegian
- Portuguese
- Spanish
- Swedish

Check if you have the latest Maconomy dictionaries. Otherwise, install the latest translations FPU to get the dictionaries. If you need Deltek Touch for Maconomy in a different language, you need to create your own dictionary and apply it.

For example: You would like to translate Deltek Touch for Maconomy to Hungarian. Assuming that you already have a Hungarian dictionary, you need to add the Touch translations to it:

1. In **Translations.<shortname>.DK** search for "{Touch}". This action gives you the list of terms to be translated.
2. You must translate all strings postfixed with {Touch} and add the translations to your Hungarian dictionary. For example:

Yes{Touch} Igen

Appendix B: Touch Server URL in Email

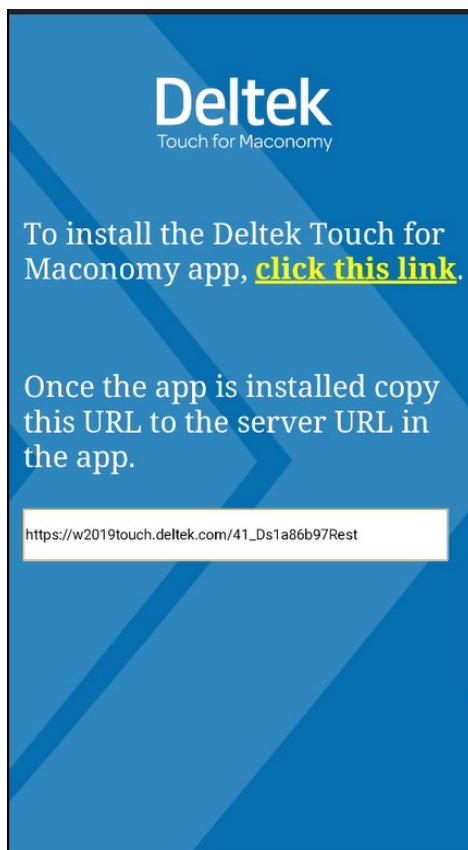
Logging in for the first time requires users to enter the complete URL of the Touch server.

To simplify the first use of the app, you can send an email containing a link that directs users to a page with another link which allows them to download Deltek Touch from app stores. If the app is already installed, users must copy the Touch URL from this page and manually paste it in the Touch **Server URL** field in the app.

Link for Customers

The link that you send to users is a hyperlink. When users tap the hyperlink, the following scenarios occur:

1. The initial setup screen displays.



2. If Deltek Touch is not installed, users must tap **click this link** to open *Google Play Store* or *Apple App Store* to download the app.
3. If Deltek Touch is installed, users must copy the URL in the initial setup screen, open Deltek Touch, and paste the URL in the **Touch Server URL** field.
4. Users tap the **Connect** button to connect to the Touch server.

How to Create the Link to Email Users

Attention: Prior to using this functionality, set the CLIENTURL in configuration.ini / tenant.ini to the Touch URL. When starting Touch from email, the URL in the above screen is automatically set to the CLIENTURL specified in configuration.ini / tenant.ini.

Each application may have specific steps required to create a hyperlink. This section describes the steps that apply to Microsoft Outlook. For other applications, see the documentation on creating a hyperlink.

1. Use the following format for the hyperlink:

<TouchURL>/maconomyshared/backend/maconomytimeurl.php

Example:

<https://maconomytouch.deltek.com/maconomyshared/backend/maconomytimeurl.php>

2. Replace **<TouchURL>** with the URL used for Touch. The Touch URL must be externally accessible to devices on the Internet. The following part of the hyperlink is fixed:

/maconomyshared/backend/maconomytimeurl.php

If Deltek Touch is being hosted in a multitenant environment, you need to append a set of strings to the link you will be sending to users. Typically, it is the Web site directory name (for example, deltektouch). For example, you should append “deltektouch” in the following URL:

<TouchURL>/maconomyshared/backend/maconomytimeurl.php?custcd=<tenant file name without extension>

Example:

https://touch.deltek.com/41_Ds1a86/maconomyshared/backend/maconomytimeurl.php?custcd=41_Ds1a86

3. Create the instructional text in the email message where you will embed the link.
4. Highlight the word “here,” right-click, and select **Hyperlink** from the menu (alternatively, click the Insert tab, and click the **Hyperlink** button).
5. Paste the hyperlink into the **Address** field of the dialog box, and click **OK**.

For example:

Click [here](#) to get started with *Deltek Touch for Maconomy*.

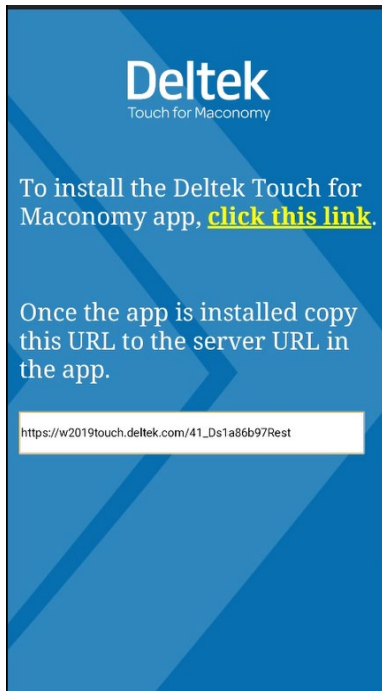
If the app is not yet installed, tap **click this link** in the initial setup screen to open the appropriate app store and install Deltek Touch. Once installed, copy the URL from the initial setup screen, and paste it in the Server URL field in the app.

If you cannot click the link, you can copy and paste the following link into your default device browser:

<TouchURL>/maconomyshared/backend/maconomytimeurl.php

When users receive the email and click the link, the following screen displays:

Appendix B: Touch Server URL in Email



Note: The URL in the screen will be the customer's Touch URL.

In this example, https://w2019touch.deltek.com/41_Ds1a86b97Rest is the customer's Touch URL.

Users must open the app and paste the URL from the initial setup screen in the **Server URL** field in the following screen:



Appendix C: Download & Install the Touch APK from DSM

System administrators can download the latest Touch Android Package Kit (APK) from the Deltek Software Manager (DSM), and distribute it to users to install Deltek Touch on Android mobile devices. This method is particularly useful if Google Play Store is not available.

Note: This procedure requires special permission from Deltek.

Download Touch APK from DSM

The APK file contains all the components of the app, and system administrators can download the file from DSM.

To download the latest APK file from DSM:

1. In your web browser, go to <https://deltek.custhelp.com>.
2. Enter your Deltek Support Center **Username** and **Password**, and click **Login**.
3. When the Deltek Support Center page displays, click **Product Downloads**.
4. On the Deltek Software Manager screen, click **Launch Deltek Software Manager**.
5. In the left pane, expand the Maconomy folder, if it is not already expanded.
6. In the table, select the check box for the latest Maconomy version.

Note: The DSM folder for the latest Maconomy version will always contain the newest Touch APK file. Earlier Touch APK files are not available in DSM.

7. The right pane displays a message stating that the product has been added to the download queue.

Note: To view the items in the download queue, click **View Download Queue** at the bottom of the left pane.

8. Click **Download** at the bottom of the left pane to download the product.

Install Touch APK

After downloading the Touch APK from DSM, system administrators can distribute the file to users then they can install the Touch APK on their Android mobile devices to use Deltek Touch.

To install the Touch APK:

1. Download the APK file that your system administrator provided.
2. Open the APK file.
The app installation screen displays.
3. In the Allow Browser to Install Apps dialog, tap **Allow**.

The security check initiates.

4. When the security check is complete, tap **Install**.
5. When the installation is complete, tap **Open** to launch Deltek Touch.

Note: If you already have Deltek Touch installed in your phone and you want to upgrade to the latest version, complete the above steps again. You do not need to uninstall the app before upgrading.

Appendix D: Additional Information

Deltek Support Center

The Deltek Support Center is a support Web site for Deltek customers who purchase an Ongoing Support Plan (OSP).

The following are some of the many options that the Deltek Support Center provides:

- Search for product documentation, such as release notes, install guides, technical information, online help topics, and white papers
- Ask questions, exchange ideas, and share knowledge with other Deltek customers through the Deltek Support Center Community
- Access Cloud-specific documents and forums
- Download the latest versions of your Deltek products
- Search Deltek's knowledge base
- Submit a support case and check on its progress
- Transfer requested files to a Customer Care analyst
- Subscribe to Deltek communications about your products and services
- Receive alerts of new Deltek releases and hot fixes
- Initiate a Chat to submit a question to a Customer Care analyst online

Attention: For more information regarding Deltek Support Center, refer to the online help available from the website.

Access Deltek Support Center

To access the Deltek Support Center:

1. Go to <https://deltek.custhelp.com>.
2. Enter your Deltek Support Center **Username** and **Password**.
3. Click **Login**.

Note: If you forget your username or password, you can click the **Need Help?** button on the login screen for help.

Guides & Resources

The following table lists the Deltek Touch documentation available for this release. Except where noted, all the references listed in this table are available for download from the Deltek Support Center.

Document Name	Description
Deltek Touch for Maconomy App Release Notes	This document contains a summary of the technical considerations, major features, and known issues of the application.
Touch for Maconomy Online Help for Android Touch for Maconomy Online Help for iOS	The Touch Online Help is available for both Android and iOS devices. It contains detailed information and instructions on how to use various features of the application.
Deltek Touch for Maconomy Layout Customization Guide	<i>This document is intended for technical consultants only.</i> It describes tasks necessary for the customization of layouts in Deltek Touch.

For Maconomy documentation and other related materials, visit the [Maconomy Information Center](#).



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