Quam V5.3
Installation Manual

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Lintra Cpm Quam Microsoft Partner
Gold Application Development
Gold Collaboration and Content

1 Content

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2 Target Audience

This document is intented for advanced users and administrators who maintain SharePoint and SharePoint applications such as Quam and wish to install a Quam Solutions.

To follow the manual knowledge of SharePoint / SharePoint solutions and administrative skills are a prerequisite.

This manual is NOT intended for end users!

3 Initial Installation of a Quam-Solution

3.1 System Requirements

3.1.1 Server Side Requirements

a) Operating System

The OS-Version depends on the SharePoint-Version to be installed. For the successful application of the quam_basic-template a non-localised (en-US) version of Microsoft Windows is required. For additional requirements of Microsoft SharePoint according to the operating system and underlying database system (SQL-Server) please refer to the appropriate documentations by Microsoft.

b) SharePoint

- SharePoint Foundation 2010 / SharePoint Server 2010 Patch Level equal or higher than June 2012 CU (14.0.6123.xxxx)

- SharePoint Foundation 2013 / SharePoint Server 2013 Patch Level equal or higher than April 2013 CU (15.0.4505.xxxx)

- SharePoint Server 2016 Patch Level equal or higher than May 2016 CU (16.0.4366.xxxx)

- If the SharePoint installation is __not__ an English one, the English language pack must be installed.

- **Do not use** PowerShell Integrated Scripting Environment (ISE) as it prevents the installation to be completed successfully by blocking certain files.
- In PowerShell, allow the execution of scripts at least temporarily (if not enabled yet) by execution of the Commandlet "Set-ExecutionPolicy Unrestricted"

c) Miscellaneous

- To enable the numerous Lookup-Columns shipped with Quam to work, throttling is disabled on all Quam Lists during the installation procedure.

3.1.2   Client Side Requirements

Quam is used with Microsoft Visio and Microsoft Internet Explorer.

Quam is based upon SharePoint Standard Features. SharePoint supports numerous web browsers, but there are certain browsers, that work within a limited scope of functions provided by SharePoint or some other functions are only accessible via alternate work steps. Lintra supports Microsoft Internet Explorer 11 for Quam at present. All levels and scales of SharePoint support for a certain third party browser are accessible at the provider's Web Sites.

The use of graphical modelling function of Quam presumes a working installation of Microsoft Visio (Version 2010 Professional, Version 2013 Professional or Visio 2016 professional, standard versions have limited access to some additional features) and the Lintra Visio Addin (Modeller). The Lintra Visio Addin itself requires .Net Framework 4.0 to be installed on the client machine.

Important: 64 Bit compilations of Microsoft Office incl. Visio are not supported!

3.1.3   Limits for data model extensions

Although Quam is installed on SharePoint that provides an large flexibility to extend the shipped data model, these extensions cannot be done without paying attentions to the limits of SharePoint and the performance of the underlying SQL-Server. Extensions or changes of the data model can cause performance issues up to timeouts, or other Quam-components as e.g. the WebParts not to work properly. Lintra urgently recommends to configure all extensions or changes on a test system and to transfer them to the productions systems after a successful test. Lintra does not give a guarantee for problems that are caused by changes or extensions of the data model. For further information see https://technet.microsoft.com/en-us/library/cc262787.aspx.

3.2   Shipped Solutions and Components

3.2.1   Required common Lintra-Components

The following components do not contain any Quam-specific features or functionality but are required to install any Lintra-Product (e.g. Quam, Cpm etc.):

- Lintra License Tool (LINTRA.License.wsp)

The deployment of the license solutions packages in your SharePoint-Farm is required to install the Quam-Solution.

3.2.2   Required Third-Party Solutions

The following solution-files is are third party components, which are used within Quam. The MetaBuilders.Webcontrols third party solution is under Microsoft Permissive license (Ms-PL) v1.1[1]. The NewtonSoft.json solution is licensed under the MIT License (MIT)[2].

- MetaBuilders.WebControls.wsp
- Newtonsoft.json.wsp

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[1] Microsoft Permissive license (MS-PL) v1.1 for Metabuilder Web Controls can be found under http://metabuildersweb.codeplex.com/license.

[2] The MIT License (MIT) for Newtonsoft.JSON can be found under https://github.com/JamesNK/Newtonsoft.Json/blob/master/LICENSE.md

3.2.3   Recommended Installation Scenarios

Quam has been tested in standard SharePoint-environments, with standard authentication providers (AD via NTLM and Kerberos), only one (path-named) site-collection per web-application and supports the standard migration path recommended by Microsoft (database detach / attach).

Some extraordinary installation scenarios (e.g. host named installations, custom authentication providers etc.) require additional consulting and enhanced specialised tests that should be developed in cooperation with the according customer to avoid unnecessary support and effort for bug-fixing and re-development. We urgently recommend local tests, ideally with local installations of backups of the customer's SharePoint-environment.

3.2.4   Quam Components

The following files are part of the Quam installation:

- LINTRA.WebpartsDeployment.wsp
- quam_basic.wsp
- QUAMFinalSteps.wsp
- QUAM.Design.wsp
- LINTRA.Design.v15.QUAM.wsp
- ReplaceDisplayNames.exe
- ReplaceDisplayNames2013.exe
- QUAMResources.de-DE.xml
- QUAMResourcesUpdate.de-DE.xml
- QUAMSetup.ps1 / QUAMSetupSP2016.ps1

3.2.5   Additional Quam Solutions

All optional Quam-Components and -solutions are shipped as WSP-Files that can be deployed manually or by the use of a Powershell-Script that executes the necessary deployment steps automatically.

3.2.6   Multi-UI-Support

Although the underlying Quam_basic Web Template is mono-lingual (English), additional UI-languages can be imported as user resources. These resources can be acquired by contacting Lintra. German resources are shipped within the standard installation package. These resources are imported automatically by the installation script if the parameter *$cultureName* is set to *"de-DE"* (recommended), otherwise additional resource can be imported by the execution of the tool *ReplaceDisplayNames* via command line or *Powershell* as follows:

Prompt:> *ReplaceDisplayNames.exe -<cultureName> -<siteUrl> -<resFileName>*

i.e. *ReplaceDisplayNames.exe "de-DE" "http://myapplication/sites/quam" "francais.xml"*

4   Installation Steps

4.1   Preliminary Installation Steps

a) Preparation / Installation of the Quam Web-Application

Make sure that the managed path for the Quam installation is present within the web application and that there is no site collection using this path. The target web application and the name of the desired managed path must be specified in the header of the Quam Installation Script.

Quam requires a separate content database for each Quam site collection. Therefore create in the Central Administration a new content database and set the other content databases to offline. Offline in this context means that the marked as offline database will not accept a new site collection, the content database itself is not offline.

b) Lintra License Tool

The Lintra License Tool is a solution that manages license requests and license installations for all products by Lintra. A proper installation of this tool is essentially required to enable users to work with all Quam-

specific features, webparts etc. which are components of Quam. The deployment is **not** part of the Quam-Installation.
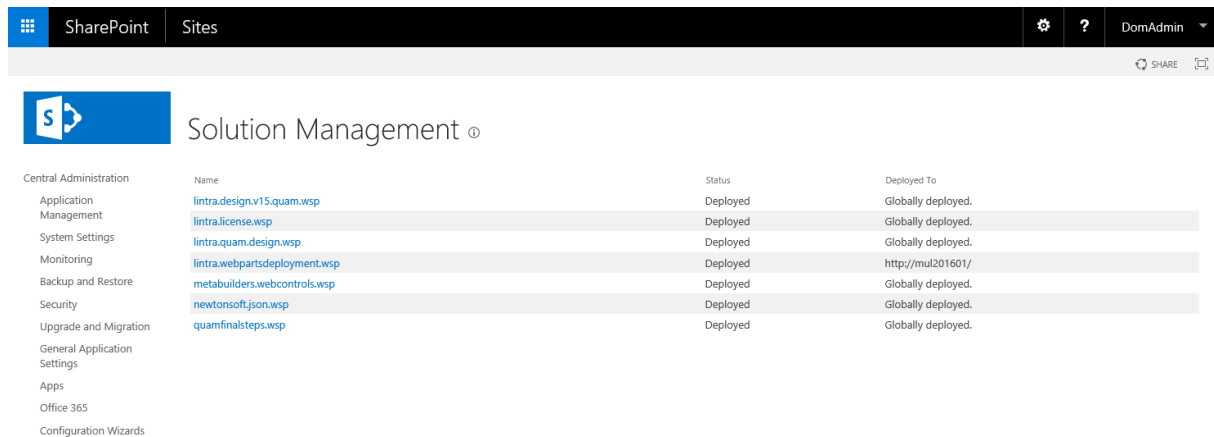
4.2 Quam Installation

All necessary steps for the Quam Installation are executed by a Powershell script. Before starting the script we recommend to copy all required files including the script(s) into one single folder on a local disk drive. To ensure the script to run properly some information of the environment and desired configuration must be specified in the header section of the script. The following step by step instruction is a brief guidance through the installation:

Start the SharePoint Management Shell with administrator privileges.

Step 1.   Edit the file quamsetup.ps1 with an editor of your own choice (e.g. *Notepad*).

Step 2.   Replace the five placeholders for $_webApp, $_siteUrl, $_siteName, $_ownerAlias and $cultureName in the header section by values of your own choice under following restrictions:

- $_webApp: URL to the web application you want Quam to be installed to. If the web application is different to the standard SharePoint web application (*SharePoint – 80*) it must be created and configured first.

- $_siteUrl: URL to the desired web site collection the installation script will create. Please ensure to create the managed path prior to executing the script.

- $_siteName: The title of the site collection to be created that appears e.g. in the title of the main page.

- $_ownerAlias: The user name in whose context the SharePoint Powershell is running, syntax is *domain\Username*.

- $cultureName: Currently supported values are *de-DE* for German and *en-US* for English. *De-DE* is recommended to avoid eventual errors and misconfigurations during the import of UI-resources.

Step 3.   Run the installation script from within SharePoint Management Shell (.\QUAMSetup.ps1, or . \QUAMSetup2016.ps1, respectively).

If there do not appear any error messages or interrupts, Quam is ready for use after the script has run successfully. After a successful Quam-Installation procedure the Solution Catalogue should contain the entries shown in Figure 1.
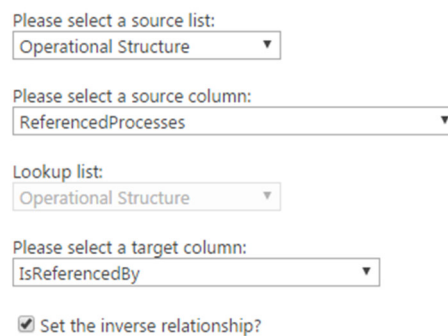
Figure 1: Farm Solution Catalogue with installed Quam Solutions (SharePoint 2016)

4.3 Additonal Post-Installation Configuration for Quam

After a successful installation of Quam 5.2, there are two manual steps necessary to ensure full functionality of the Quam system:

1. BiDi entry for ReferencedProcesses/IsReferencedBy
   - Go to **Site Contents** and click on the list **BidiSettings**
   - Click **Create a new entry**.
   - Set the controls similar to **figure 2**.
   - Click **Create a new entry**.

Figure 2: BiDi Settings Entry

2. Set standard configuration for shape naviagion
   - Go to **Site Settings** and click on the link **Quam Configuration** in the section **Quam Administration**.
   - Check the checkbox **Show process navigation** and click on **Save.** Revisit the site by using the link in **Site Settings**.

Figure 3: Quam standard configuration

- Figure 3 shows the recommended standard configuration for Quam. Set the configuration similar to Figure 3. Afterwards, click on **Save**.
- If you installed the Quam Multilanguage Basis, set the translations tables to the corresponding lists (i.e., German → TranslationTableDe-DE)
- The configuration options are described in detail in the Quam 5.2 Manual.

4.4 Add-On-Installation

Quam supports optional Add-Ons which extend the functionality of Quam. Since this guide is focussed onto installation purposes only, please refer to the user's guide of the particular solution for additional information.

The Add-ons can be installed in any order and are not depending on each other. However, Lintra recommends the following order of installation:

1. Quam MLB
2. Quam Word Report
3. Quam CCM
4. Quam Audit Management

5   Deinstallation

A deinstallation of Quam is dependent from the data you wish to preserve. For a full deinstallation, perform the following steps. **Note**, that all content is removed, once you delete the Quam Site collection.

1.   Retract and remove the Quam solutions .

   - LINTRA.WebpartsDeployment.wsp
   - QUAMFinalSteps.wsp
   - QUAM.Design.wsp
   - LINTRA.Design.v15.QUAM.wsp (for SharePoint 2013 and SharePoint 2016)
2.   Delete the Quam Site Collection

6   Appendix

The following chapter describes all steps which are made by the automatic installation (see Chapter 4.2) with "QUAMSetup.ps1" or "QUAMSetup2016.ps1", respectively, and refer to the changes of the farm or web application. Additionally, some configurations of the Quam site collection and web are made. As they scope only to the Quam site collection, they are omitted in this appendix

6.1   Configurations of the web application

Some properties of the web application Quam is installed to are changed. These are:

   - The mime types "text/html" and "image/svg+xml" are added to the allowed inline downloaded mime types of the web application.

   - The "SharePoint Admin Service" is started, if it is stopped.

   - A Site Collection is added to the chosen web application using the currently available Content Database of the web application.

   - The throttling of the Quam specific lists is disabled (see Chapter 3.1.1).

6.2   Installation of the solutions

Several shipped solutions are added and installed to the solution store of the farm. Please be referred to the manual pre-installation steps and the solutions therein (see Chapter 3.2.1).

   - MetaBuilders.WebControls.wsp

   - NewtonSoft.JSON.wsp

   - LINTRA.WebpartsDeployment.wsp

   - LINTRA.QUAM.Design.wsp for SharePoint 2010 and LINTRA.Design.v15.QUAM.wsp for SharePoint 2013 and 2016

   - QUAMFinalSteps.wsp

   - quam_basic.wsp for SharePoint 2010 and 2013 and quam_basic16.wsp for SharePoint 2016. Note, that this solution contains the underlying web template and is retracted after the successful installation and will not be visible in the solution store.

6.3   Enabling of features

Additionally to the already activated features in the web template, some features are activated once the solutions are installed properly.

- QUAMSolutionFinalSteps_UploadListTemplates. This solutions adds the list templates used in the web template.

- QUAMSolutionFinalSteps_CreateListFromTemplate

- QUAMSolutionFinalSteps_FixBiDiSettingsList,

- QUAMSolutionFinalSteps_FixWebPartConfiguration,

- QUAMSolutionFinalSteps_AddEventReceivers,

- QUAMSolutionFinalSteps_UpdateModelerEditform,

- LINTRA.QUAM.Administration

- QUAMSolutionFinalSteps_TranslateWebPartTextProps

- QUAMSolutionFinalSteps_PersonalizedHomepage

- Webpart "Process Connection View"

- Webpart "Extended Reference Matrix"

- Design Feature (for SharePoint 2013 and SharePoint 2016)

- Composed Look Feature (for SharePoint 2013 and SharePoint 2016)

6.4 Running the post installation translations

If Quam is chosen to be installed in English, some Quam artefacts like fields and content types (content of the Quam site collection) are set to multilingual and added with user resources. This is done by running the following command line application.

ReplaceDisplayNames.exe for SharePoint 2010 and ReplaceDisplayNames2013.exe for SharePoint 2013 and 2016

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