SETUP GUIDE

MarvelClient™

All Editions

SETUP GUIDE

Contact

E-Mail Support: support@panagenda.com

E-Mail Sales: sales@panagenda.com

Web: www.panagenda.com

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Welcome to panagenda MarvelClient

This guide will help you to set up panagenda MarvelClient. It covers installion on the Domino server and on clients for all MarvelClient (MC) editions, including the free offerings **Essentials** and **MC for Nomad**.

About MarvelClient

panagenda MarvelClient is the world's fastest and leading client management solution for Notes and Nomad, supporting HCL Nomad on mobile devices (on all supported operating systems) and HCL Notes on Microsoft Windows, Apple macOS 64 bit, as well as virtual desktop infrastructure (VDI) like Citrix and Windows Terminal Server and . Versions for Linux and Mac OS 32 Bit are also available upon request. Naturally, MarvelClient also supports IBM Client Application Access (ICAA), formerly known as the Notes Browser Plugin.

On HCL Domino Servers, MarvelClient only consists of two databases, which are operating system independent.

As of today, customers in over 70 countries run more than 11 million licenses of panagenda MarvelClient.

Since every customer is different, MarvelClient can be licensed with different feature sets as outlined below.

Upgrading MarvelClient - including MarvelClient Essentials - is easily done from within the MarvelClient Config database upon successful **purchase**.

For further details, please visit our website.

BASIC INFORMATION for MC

System Requirements

For MarvelClient Essentials

Note: Whilst MarvelClient Essentials works just fine on Notes and Domino 6 and up,

getting support requires release 9.0 or newer together with an active maintenance contract

from IBM/HCL, or a licensed MarvelClient under active maintenance from panagenda.

HCL Domino servers

- Domino versions 9.x and up on all IBM/HCL supported platforms
- 50 MB of disk space, plus approximately 100 KB per end-user in Analyze Database

Clients (end users)

- Notes releases 9.x and up (including ICAA - IBM Client Application Access)
- **HCL Nomad app**
- Windows 7, 8, 10, Citrix, Windows Terminal Server and Intel macOS 64 bit.
- 5 MB of disk space

Notes clients (Administrators)

- Recommended: Microsoft Windows Notes version 9.0.1FP7 and up (including ICAA - IBM Client Application Access)
  With the following exceptions, any Notes client release 9.x and up works fine for both MarvelClient databases:
  Notes 9.0.1FP7 or higher is required for Online Updates of type Java in combination with https (because of required SSL and TLS support) in the MarvelClient Config database.
  Notes 9.0.1 or higher is required to use the XPages based charts and forms in MarvelClient Analyze.
  On Intel macOS 64 bit select functionality will display an "unsupported platform" dialog.
- Windows 7, 8, 10, Citrix, Windows Terminal Server and Intel macOS 64 bit.
- 5 MB of disk space

For panagenda customers

HCL Domino servers

- Domino versions 6.x and up on all IBM/HCL supported platforms
  Support for Domino 4.x and 5.x is available upon request*.
- 50 MB of disk space, plus approximately 100 KB per end-user in Analyze Database

Clients (end users)

- Notes releases 6.x - 10 (including ICAA - IBM Client Application Access)
  Support for Notes 5.x is available upon request*.
- **HCL Nomad app**
- Windows 7, 2003, 2008, 8, 10, Citrix, Windows Terminal Server and Intel macOS 64 bit.
  Support for the Notes Browser Plugin and operating systems NT4SP2, 2000, XP, Vista, Intel macOS 32 bit and Linux is available upon request*.
- 5 MB of disk space

Notes clients (Administrators)

- Recommended: Microsoft Windows Notes version 9.0.1FP7 and up (including ICAA - IBM Client Application Access)
  With the following exceptions, a Notes client release 7.x and up will most likely suffice for both MarvelClient databases:
  Notes 9.0.1FP7 or higher is required for Online Updates of type Java in combination with https (because of required SSL and TLS support) in the MarvelClient Config database.
  Notes 9.0.1 or higher is required to use the XPages based charts and forms in MarvelClient Analyze.
  Notes 8.5 or higher is required for the decryption of centrally collected ID file copies (only available from within MarvelClient Analyze in combination with a special license).
  On Non-Windows platforms, select functionality will display an "unsupported platform" dialog.
- Windows 7, 2003, 2008, 8, 10, Citrix, Windows Terminal Server and Intel macOS 64 bit.
  Support for the Notes Browser Plugin and operating systems NT4SP2, 2000, XP, Vista, Intel macOS 32 bit and Linux is available upon request*.
- 5 MB of disk space

* Note that not all MarvelClient modules are supported on all platforms - for further details see supported operating systems for panagenda MarvelClient modules.

> ⓘ Support is limited for operating systems. beta and EOL releases (EOL = End Of Life = releases that are no longer supported by IBM/HCL), as well as for operating systems which are no longer supported by the respective manufacturer.

MarvelClient Components

MarvelClient consists of the following major major components:

Two databases on IBM Domino Servers

- A Config(uration) database which contains instructions for clients
- An Analyze database storing detailed information about clients and their respective configuration

> ⚠ **MarvelClient does not require any server tasks.**

Typically, both of the above databases are replicated across all mail servers, which are assumed to be the servers end-users can reach most efficiently. The databases scale along easily, even in large environments with several 100,000 users.

One local MarvelClient binary/file on IBM Notes Clients*

> ⚠ **No local file is required for HCL Nomad clients since panagenda MarvelClient is fully integrated into the Nomad app (starting with version 1.0.4).**

- mc.dll or pmc.dll on Microsoft Windows, Citrix and Windows Terminal Server
- libmarvelclient.dylib or libpmc.dylib on Intel Mac OS X 64 bit
- mc.dylib on Intel Mac OS X 32 bit
- **mc.so** on Linux

* once installed, the local MarvelClient file automatically creates and updates a couple of additional local files in the so called MarvelClient Working Directory.

Further information to get a better understanding of the most important MarvelClient basics can be found on the following knowledge base pages: https://www.panagenda.com/kbase/x/44fo.

GETTING STARTED with MC

Installation Types

Installing the panagenda MarvelClient databases allows for the following types of installation.

Local Installation

In this setup, both databases (Config and Analyze) are installed on a local IBM Notes client.

> ⚠ **Whilst a local installation is well suited for a quick evaluation, it does not allow for testing with multiple users.**

Dedicated Server

In this setup, both databases (Config and Analyze) are installed on one dedicated IBM Domino server.

Whilst we do not recommend to use a dedicated server for lack of potentially needed scalability, you can "hard-code" MarvelClient to use one particular server as opposed to each user's mailserver.

> ⚠ **If used for production purposes, all users and/or test servers must have a good connection to this server. The server also needs to be able to process the maximum number of concurrent sessions at peak times – this number depends on the number of users that potentially log on during peak working hours and the session duration on the Domino server.**

Recommended for environments up to a few thousand users: Load-balanced/Production

In this setup, the Config and Analyze databases are replicated across all mail servers, where each Analyze database contains *all data from all users* across all mail servers.

The advantage of this "non-hardcoded" installation type is, that any change at the server level (such as moving a user from one Mailserver to another, or adding new servers) doesn't affect MarvelClient: In notes.ini; the corresponding MC_DB= entry refers to "%notes_homeserver%!!YOURDIRECTORY\YOURCONFIGDATABASENAME.nsf" , which means that there is no hard-coded servername.

> ⚠ **Note: %notes_homeserver% is dynamically resolved from a user's then current location document.**
> **Also note: You must make sure that the Audit agent in the Analyze database only runs on ONE server, which then replicates audited documents back to all other servers (if each mail server were to run the audit agent, this would generate a large number of replication conflicts).**

Recommended for all environments, especially for many (hundreds of) thousands of users: Hub/Spoke

Similar to the Load-balanced/Production type install, the Config and Analyze databases are replicated onto every mail server, too. However, in order to reduce the size of the Analyze database on each mail server to just the documents of each mailserver's respective user population, you choose for a "Hub and Spoke" setup: In this setup scenario, all Analyze databases are replicated together into one large Analyze database on a hub. In the Analyze database, the only hub server is granted the role "[Admin]", whereas the mail servers are not. Thereby the Analyze databases on mail servers only store the analyze data of "their own users" and replicate it to the hub, where all data is gathered.

> ⚠ **Note: As to avoid replication conflicts, you must only schedule the Audit All Agent in the Analyze database on EITHER the hub only OR all spokes excluding the hub.**

Server Installation

The following steps will get you started with panagenda MarvelClient in just 20 minutes:

⚠️ **Please note that panagenda MarvelClient is fully integrated into the HCL Nomad app (starting with version 1.0.4) so only the server-side installation is required.**

The MarvelClient Install Wizard

1. You may want to read through the **System Requirements** and **Installation Types** before installing panagenda MarvelClient - in general it's also a good idea to read through **MarvelClient: Good to know**.

2. To install the MarvelClient Databases on an HCL Domino server or your Notes client, open the MarvelClient Installer database and click on the "Install panagenda MarvelClient" button.

   You can download the MarvelClient Multi-Edition Installer here.

   ⓘ A MarvelClient Essentials Installer is included in HCL Domino 10.0.1+ in the folder "panagenda". You will find the Multi-Edition Installer in the same folder "panagenda" in Domino 11+.
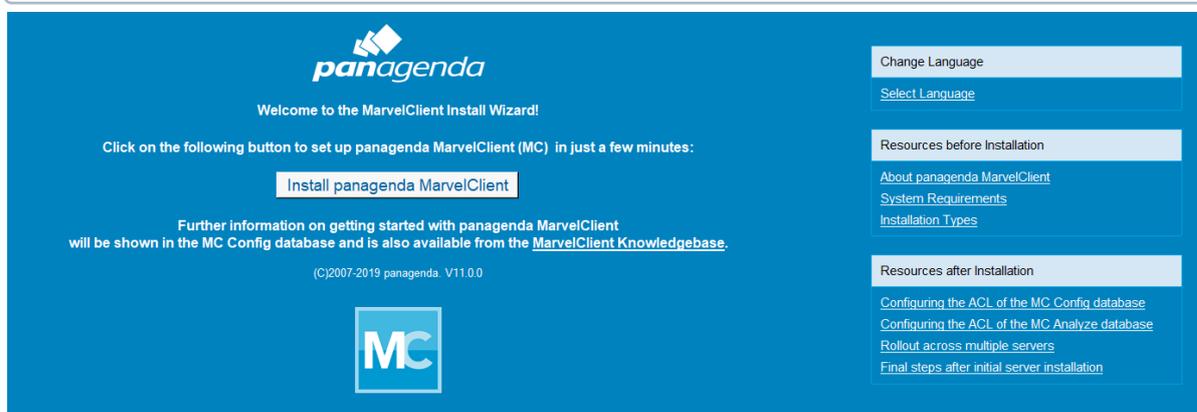
Just follow the instructions of the Install Wizard. You can select your license option in a furhter step:
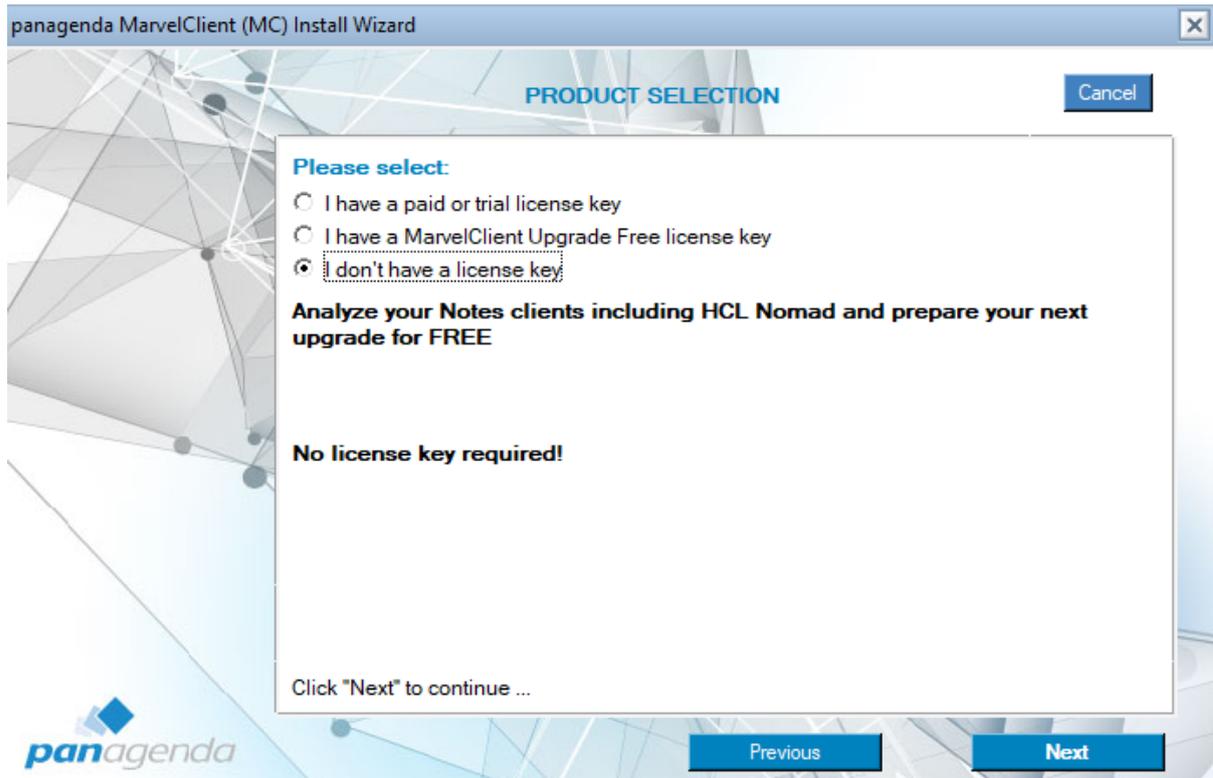
> ⓘ **If during installation you choose settings different from the default, take a note as you will need them again later on.**

3. Please perform an Online Update; for details see **Updating the MarvelClient Config and Analyze Databases.**

4. For Notes releases < 10.0.1, install the MarvelClient binary on your local machine as described here: **Setting up your first IBM Notes Client with panagenda MarvelClient.**

> ⚠ **Note that the MarvelClient binary is included in Notes release 10.0.1 and newer releases.**

5. Restart the client (make sure that you also close any Admin and Designer clients) to upload your first document into the MarvelClient Analyze database.

More information on manual MarvelClient installation options can be found the following knowledge base articles: **https://www.panagenda.com/kbase/x/2ofo**.

Update Server Databases

After the creation of the databases, please perform an online update in the Configuration database as follows:

A. In the MarvelClient navigator go to Administration\Online Update, which requires the ACL role [AOnlineUpdate].

B. Fill out the Online Update Page:

1. Select whether you want to "Update MarvelClient Essentials" or "Enter a license key"
2. If you chose "Enter a license key" under 1., please enter your 32 character license key
3. As Update-Type, select "Update this database"
4. Adjust the update directory if desired, or leave the default which is %DATA%\panagenda_update.
   The update directory is usually only important if you prepare updates for different Configuration databases
5. Please read and accept the license agreement (**http://www.panagenda.com/legal**)
6. The standard protocol version is HTTPS 1.0; in rare cases you may have to use HTTPS 1.1,
   or even just HTTP 1.1 or 1.0. An Online Update of type Java is required for customers in Asia.
   All other customers can select between LotusScript (=recommended) or Java based Online Update.
   A Java based Online Update is usually faster, whereas a LotusScript based Online Update allows to
   establish the update connection based on system settings
   Choose Direct connection, proxy connection or connection according to system settings
   (LotusScript based Online Update only). When selecting a Proxy connection, please make sure that you
   enter the Proxy server including the port number, such as "**MyProxy.MyDomain.com**:3128"
7. The update process can also use the Notes ID currently in use to automatically sign design elements
   after a design update, which is recommended only if an administrator or signing ID is used to perform
   the online update. For existing installations, the Online
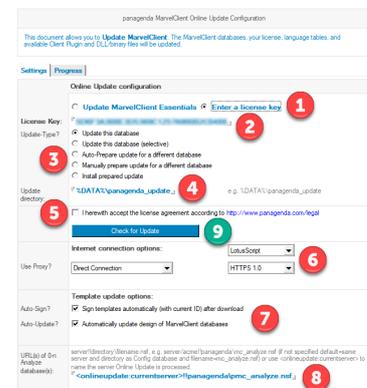
Update can not only download new templates
but also update the design of your existing databases
automatically.

8. Specify the path to one or multiple Analyze database(s)-
Examples:
<onlineupdate:currentserver>!!
panagenda\pmc_analyze.nsf
<onlineupdate:currentserver>!!
panagenda\mc_analyze.nsf
or
MyHubserver!!admin\analyze.nsf

9. To run the Online Update click the "Check for Update"

button

⚠ **Note that during an Online Update, %notes_homeserver% is automatically replaced with the current mail server of the user running the update, <onlineupdate:currentserver> is automatically replaced with the server of the Config database in which the Online Update is carried out from.**

The path of the Analyze database is needed to check whether the design of it is up to date. If you have multiple Analyze databases that do NOT replicate, please specify multiple URIs. If your Analyze databases do replicate, then you should only specify ONE master replica.

✅ **Release Notes**

Release Notes can be found here as RSS feed: **https://www.panagenda.com/ kbase/createrssfeed.action? types=page&spaces=mc&title=panagenda+MC+Release+Notes&labelString=rn-mc&excludedSpaceKeys%3D&sort=modified&maxResults=10&timeSpan=5&sho wContent=true&confirm=Create+RSS+Feed**

C. If you did not select for the Config database to be signed in step 7 above, then open your Admin client, navigate to the location of your MarvelClient databases, right-click on the MarvelClient Config and Analyze database and select "Sign". Then select your desired

signing ID and sign all design documents. Ideal signing IDs have the right to run agents on the server and have access to both the MarvelClient Config and Analyze database.
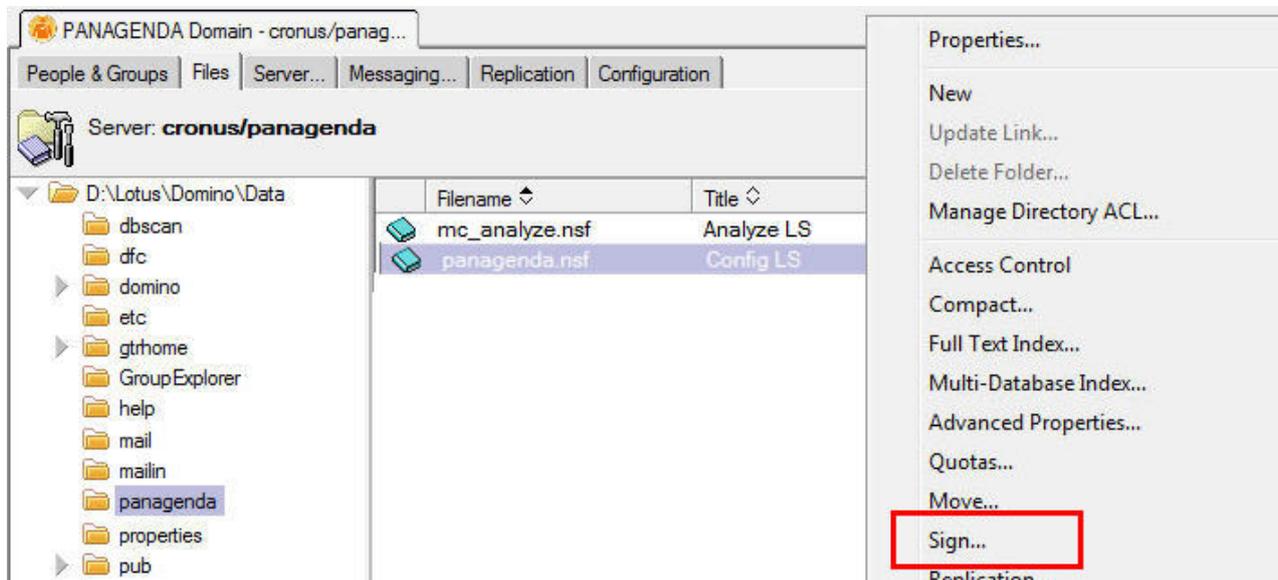
⚠ **NOTE that for MarvelClient Essentials the default filenames are different from above screenshot: panagenda\pmc_config.nsf and panagenda\pmc_analyze.nsf.**

D. For existing MarvelClient installations (NOT for MarvelClient Essentials), after each Online Update, check the "License Update" view to ensure that the latest license is enabled. Online Update does enable new **(if checksum is different)** licenses automatically - except for when running your very first Online Update without any license document at all yet.

E. For existing MarvelClient installations, please also check the "DLL Updates" view as a newer binary for e.g., Windows or Mac 64 Bit may have been dowloaded, in which case the new documents are DISabled by default. Enable them once you are ready to use the new DLL and be aware that all users will automatically update their binary as they restart IBM Notes. You may want to restrict new binaries on the Who tab for testing purposes first.

Also, don't forget to check the option "Always detach binary/"DLL" to Notes data directory" to ensure that updates also work for users for whom the binary has initially been deployed to the Notes program directory (as is the case for MarvelClient Essentials, too).

> ⚠ **Note that a binary update requires TWO client restarts: At the next client start, the old binary loads and downloads the new binary. Upon the next client (re)start, the new binary is loaded.**

The manual update process is described in the following knowledge base article: **https://www.panagenda.com/kbase/x/Pojo**

Client Setup

> ⚠ **Please note that panagenda MarvelClient is fully integrated into the HCL Nomad app (starting with version 1.0.4) - no further installation is required for the local MarvelClient file. Please refer to the following knowledge base page for further details: https://www.panagenda.com/kbase/x/fge0AQ.**

In the Configuration database, click on *Administration > DLL Updates* and open the document for the respective operating system (newest at the top).In order to install MarvelClient on your very first client, you may either include it in a **rollout to multiple clients** or proceed with a manual installation as follows:

- Save the attachment as mc.dll/mc.dylib/mc.so into EITHER your Lotus Notes Program OR your Lotus Notes Data directory.

> ⚠ **Note that on Citrix the Program directory is highly recommended, however not required.**
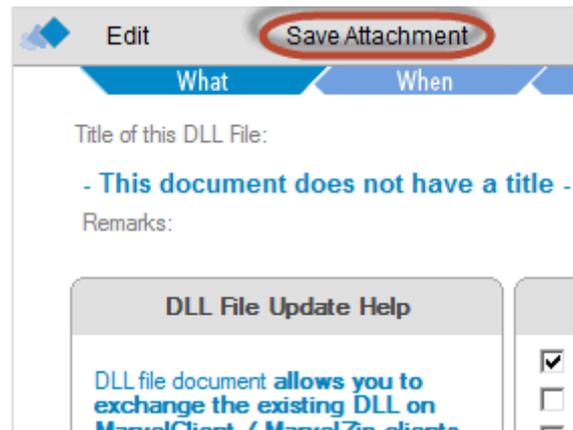
- In notes.ini, please search for an entry "EXTMGR_ADDINS="

- If such an entry already exists, please add "mc.dll", "mc.so" or "mc.dylib" accordingly – without quotes, with comma separation – for example:
  EXTMGR_ADDINS=EntryOne,EntryTwo,mc.dll

- If such an entry does not exist yet, add a respective new entry/line to your notes.ini:

  EXTMGR_ADDINS=mc.dll

> ⚠ **Note that there must not be more than one "EXTMGR_ADDINS" line in notes.ini, as only the very first such line is relevant, any others are ignored by IBM Notes.**
>
> **Also note that when adding a new line to notes.ini, the very last line of notes.ini must be an empty line (this has nothing to do with MarvelClient).**

- Add another new line/entry to notes.ini as follows:
  MC_DB=Servername!!Directory\FilenameOfYourConfigurationDatabase.nsf
  (Adjust Servername, Directory and Filename as needed)
  Server and filepath are separated with a double exclamation mark (!!). Server and filepath must correspond to where you chose to install the MarvelClient Configuration database.
  Please note, that "MC_DB" supports the placeholder "%notes_homeserver%" which is dynamically replaced at run-time with the then current end-user's mailserver, for example:
  MC_DB=%notes_homeserver%!!panagenda\panagenda.nsf

Further information about the rollout of panagenda MarvelClient to multiple end users is provided in the following knowledge base articles: **https://www.panagenda.com/kbase/x/ Eojo**.

ADDITIONAL INFORMATION for MC

panagenda MarvelClient Knowledge Base

Please visit our **MarvelClient knowledge base** for a **comprehensive documentation**, useful **technical articles**, **frequent support cases**, **release notes** and more: **https://www.panagenda.com/kbase/display/mc**.

Special Option to enable but not deploy MarvelClient Essentials

This document describes how to enable, but not deploy MarvelClient Essentials in an environment with IBM Notes client >= 10.0.1.

For Notes 9.x clients, you need to also deploy the client binaries - in that case, please see **Rollout of panagenda MarvelClient to Multiple End Users**.

IBM Domino Policies

To enable the readily included client component in IBM Notes 10.0.1 and up using IBM Domino Policies, simply create a desktop settings policy (or add to an existing one) as follows:

1.) Click on the Custom Settings tab. On the notes.ini tab, enter

Item: $MarvelClientEnabledViaPolicy

Value: 1

2.) Click on Add/Modify Value >> to add the new setting to the list of notes.ini entries to manage (3.).
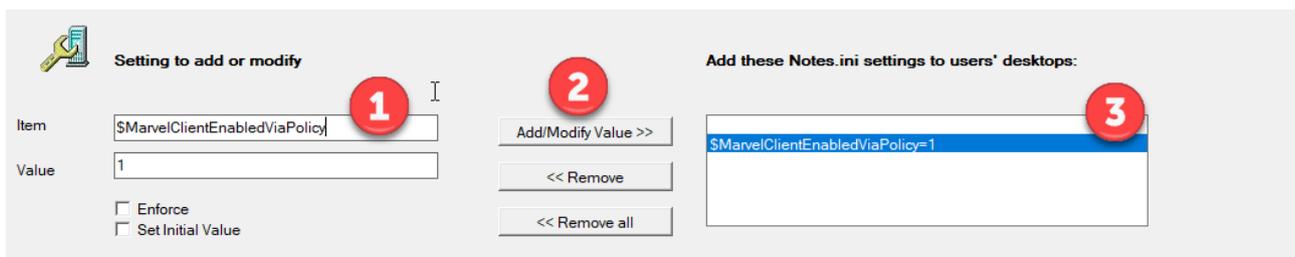
Next, click on OK and then enter the following Machine specific formula (thank you to Alex Marocchi from Leitstelle Tirol for the SetOnce tip on Sep 26, 2019!):

@if(@lowercase(@left(@platform;3))="mac";

"EXTMGR_ADDINS=libpmc.dylib: SetOnce";

@lowercase(@left(@platform;3))="win";

"EXTMGR_ADDINS=pmc.dll: SetOnce";"")
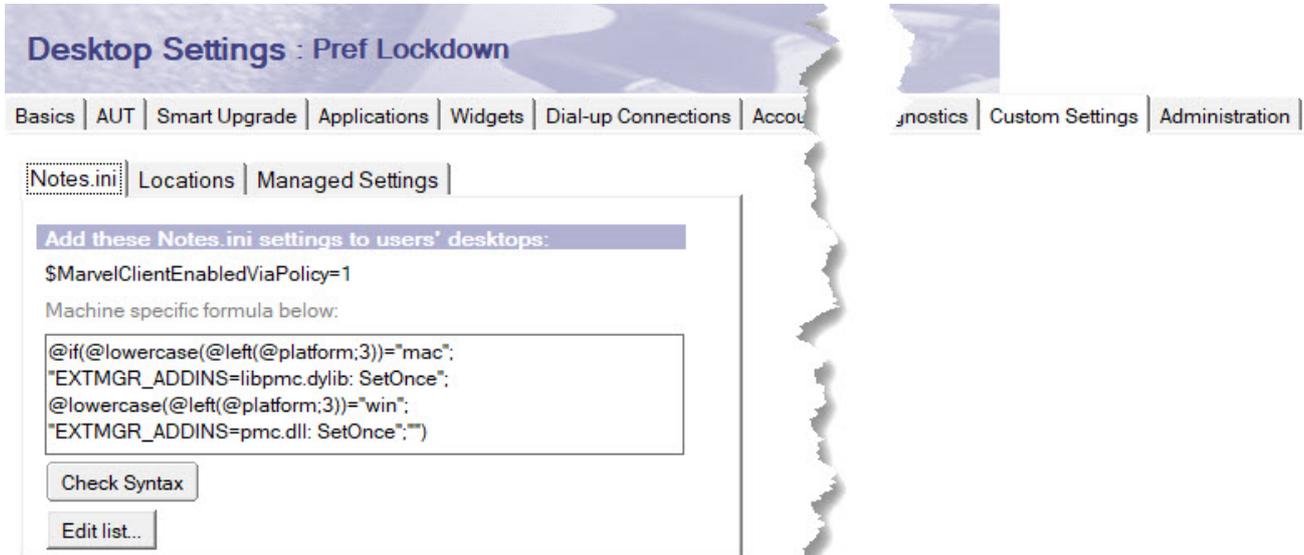
Save and close the policy document.

NOTE: if you are adding to an existing Policy and there is already a machine specific formula, then you need to adjust the formula accordingly or simply create a new desktop settings Policy document.

NOTE: the above configuration will remove any other registered EXTMGR_ADDINS – Policies cannot add to already existing entries. If you need to preserve existing entries, please use one of the following two options:

Mailbased Install or (Mailbox or other database's) PostOpen Script

> ⚠️ **Important**
>
> **Before carrying out the below steps, please ensure that the design of the MarvelClient Config database is dated 20181122* or newer**
>
> The current version can be checked be clicking on the "About" link in the bottom right corner of the MarvelClient Config database, or via the Notes client menu Actions\About.
>
> If your current version is < 20182211*, please run an Online Update via Administration\Online Update and close and re-open the database thereafter.

If your MarvelClient Config database is newer than 20182211*, you can simply create a MarvelClient Installation document as follows:

1.) Create a new Installation document via Administration\Installation → New Install

2.) Select whether you want to create emails with installation code or a PostOpen script for e.g., the mailfile template

Mailbased Install

3.1.) Review all fields and adjust as wanted; the following instructions only cover the most important ones:

3.2.) Choose whether you want to send out emails with a stored form (recommended) or button:

3.3.) Specify a subject for the email to be sent (ideally one that makes users open/read the email), together with one or multiple recipients (people and/or groups):

3.4.) Choose one or multiple target platforms, for which you wish to enable MarvelClient Essentials:

NOTE: MarvelClient Essentials is available for Windows and Mac 64 bit "only".

3.5.) Select the desired install behavior on Citrix - this is either "Run on Citrix but do not deploy any files" (recommended) or "Do not run install on Citrix":

3.6.) The options "Mailfile Owner", "Repeatable after successful installation" and "Repeatable after failed installation" are important to think through:

In general we recommend to check both "Repeatable*" options, as usually installations only fail when a user is offline when reading the install email, and users often have more than one machine, so allowing them to repeatedly use the install mail on multiple clients is needed.

Checking the "Mailfile Owner" option is a good idea, if all users have their own personal mailfile, to prevent installation by delegates from within other people's mailfiles.

Also, it's a good idea to specify an email address to send logs back to - for smaller deployments this could be your personal email address, for larger deployments with thousands of users you may wish to use a mail-in database.

3.7.) Specify on which server the MarvelClient client component can find the MarvelClient config database:

In larger deployments it is recommended to use the first "Use %notes_homeserver% to synchronize" option to ensure that each client opens the MarvelClient config database on the mailserver of each end user.

For testing and smaller deployments, you may want to specify a dedicated server name through the second option.

3.8.) Enter the filepath of the MarvelClient Config database on the server chosen under 3.7. - for a standard install this is

panagenda\pmc_config.nsf

3.9.) The "Target directory" option can be ignored as we will not be adding/deploying and client binary files:


3.10.) Make sure that you speficy **pmc.dll** as the Microsoft Windows target file name and **libpmc.dylib** as the Apple Intel macOS 64 bit file name:

NOTE: Please do NOT attach any program files via the "+" button - the goal is to create an install document that does not deploy any binaries, but only enables them.

3.11.) Upon saving the document, the following warning is displayed:
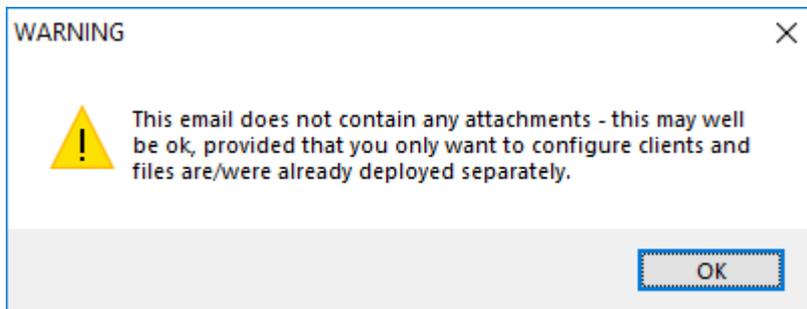
Since this is exactly what we want to do, you can click on OK.

3.12.) Next, you will be prompted whether you want to send out the install mail according to your configuration:
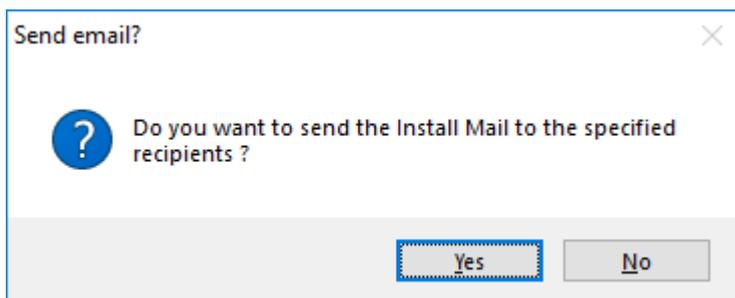
Click Yes whenever you are ready to send out the install mail.

After closing the document, you can return to it and re-use it any time to adjust the configuration or specify new recipients.

(Mailbox or other database's) PostOpen Script

4.1.) Review all fields and adjust as wanted; the following instructions only cover the most important ones:

4.2.) If you wish to add the install code to e.g. the mail template, but only want to test installation with select users or groups first, simply enter the corresponding user names and/or groups into the "Restrict Readers" field:

4.3.) Choose one or multiple target platforms, for which you wish to enable MarvelClient Essentials:

NOTE: MarvelClient Essentials is available for Windows and Mac 64 bit "only".

4.4.) Select the desired install behavior on Citrix - this is either "Run on Citrix but do not deploy any files" (recommended) or "Do not run install on Citrix":

4.5.) In general it's a good idea to specify an email address into the field "Send logs back to" - for smaller deployments this could be your personal email address, for larger deployments with thousands of users you may wish to use a mail-in database.

4.6.) Specify on which server the MarvelClient client component can find the MarvelClient config database:

In larger deployments it is recommended to use the first "Use %notes_homeserver% to synchronize" option to ensure that each client opens the MarvelClient config database on the mailserver of each end user.

For testing and smaller deployments, you may want to specify a dedicated server name through the second option.

4.7.) Enter the filepath of the MarvelClient Config database on the server chosen under 4.6. - for a standard install this is

panagenda\pmc_config.nsf

Path and filename of configuration database ("panagenda.nsf"): ⌈ panagenda\pmc_config.nsf ⌋

4.8.) The "Target directory" option can be ignored as we will not be adding/deploying and client binary files:


Target directory for program files ?
- ○ IBM Notes PROGRAM Directory
- ● IBM Notes DATA Directory
- ○ IBM Notes DATA Directory AND ALL USERS COMMON DATA Directory

4.9.) Make sure that you speficy **pmc.dll** as the Microsoft Windows target file name and **libpmc.dylib** as the Apple Intel macOS 64 bit file name:

NOTE: Please do NOT attach any program files via the "+" button - the goal is to create an install document that does not deploy any binaries, but only enables them.

4.10.) Upon saving the document, the following warning is displayed:

WARNING ✕

⚠ This email does not contain any attachments - this may well be ok, provided that you only want to configure clients and files are/were already deployed separately.

OK
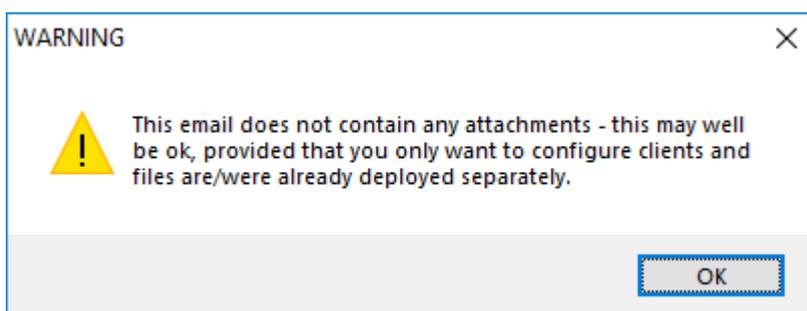
Since this is exactly what we want to do, you can click on OK.

4.11.) Click on "Generate PostOpen Script" on the top right of the document and follow instructions in the remarks at the top of the generated code.

Should you want to embed the code into a different database (e.g., the phone book application or similar that all end users access on ideally a daily basis or even more often), then you can simply paste the code into Code\Database Script of that application and insert MC_Install into the PostOpen section.

You can also add the code to the Database Script and PostOpen event of bookmark.ntf on client deployments, if you do not have a central database that all your end users access frequently. In this case, you would have to deploy the code to all bookmark.ntf files across your clients (for multiuser setup, don't forget the mui subfolders) and trigger a design update by deleting TemplateSetup from notes.ini.

After closing the document, you can return to it and re-use it any time to update the configuration and code if needed.

NOTE that when you update the configuration, you must also update the code in the correspdonding database/template.

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