QUICK START GUIDE

Version 5.0

BIT TRUSTER®

1.Prerequisites

1.1.Server requirements:

Windows Server 2008 R2 or higher.
RAM: 2 GB
Disk Space: 1 GB
CPU: dual core CPU
Installation on virtual machines supported
Internal mail server recommended for reporting and user notifications

Note: We recommend installing the BitTruster Server on a member server, not on a Domain Controller. If you need to run the installation on a Domain Controller, please make sure that a SQL Server is already installed as the BitTruster installation package will fail to install with integrated SQL database

1.2.Database requirements:

Microsoft SQL Server 2008 R2 or higher. (SQL Express supported.)
BitTruster installation package comes with Microsoft SQL Express.

1.3.Client Computer:

Windows 7 Enterprise
Windows 8/8.1 Pro or Enterprise
Windows 10 Pro or Enterprise
Windows 2008 or later
Make sure TPM is available on the test computer. BitTruster is capable of managing and enabling the TPM chip remotely as long as it is enabled in the BIOS/UEFI settings.

If the computer has no TPM chip available, you can run the evaluation enabling Passphrase protection instead of TPM.

Note: Passphrase Protection is only available for Windows 8 and Windows 10, Windows 2012 and 2016.

1.4.Account Permissions:

Domain account, local admin on the test server, local admin on the test clients, permission to create and assign GPOs (only during installation)

BitTruster recommends running the evaluation in a Test/Evaluation environment where you have full control to make ad-hoc changes where needed.

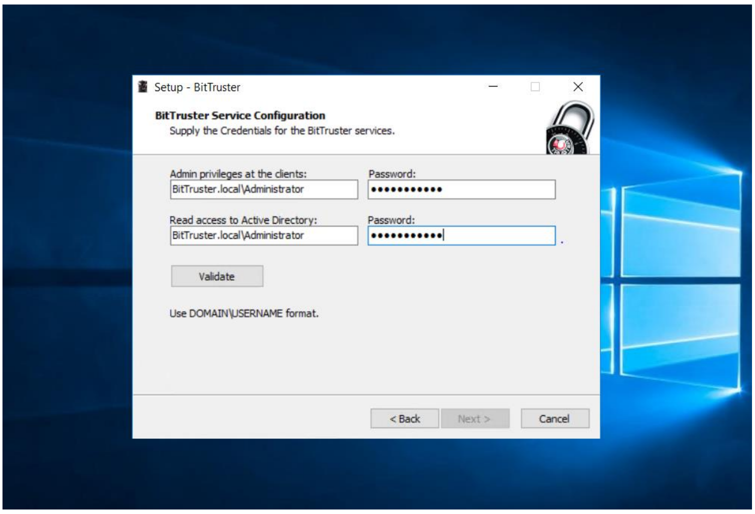
2.Installation:

Download Installation Package from the download link you have received from BitTruster. If you do not have a download link send an email to support@BitTruster.com or go to www.BitTruster.com to request a download link.

The installation package includes BitTruster and SQLExpress and provides all configuration you need to evaluate BitTruster.

2.1.Install BitTruster Server

Run the Install Package as administrator and follow the wizard instructions:



Setup - BitTruster

BitTruster Service Configuration

Supply the Credentials for the BitTruster services.

Admin privileges at the clients: BitTruster.local\Administrator

Password: •••••••••••

Read access to Active Directory: BitTruster.local\Administrator

Password: •••••••••••

Use DOMAIN\USERNAME format.

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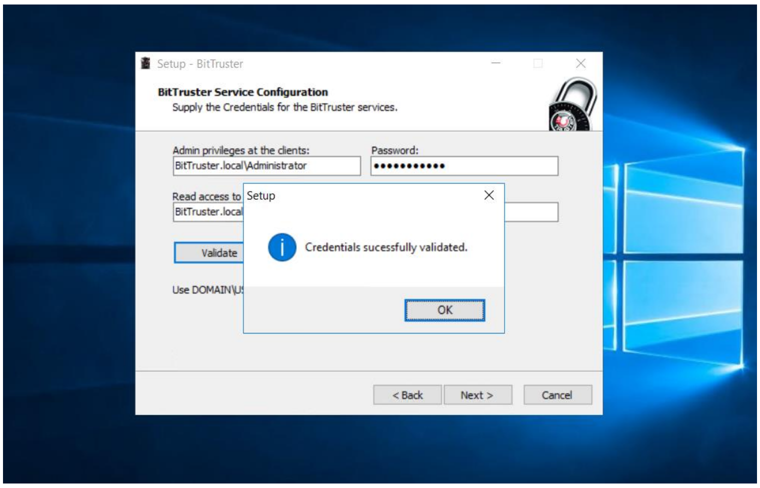

Setup - BitTruster

BitTruster Service Configuration

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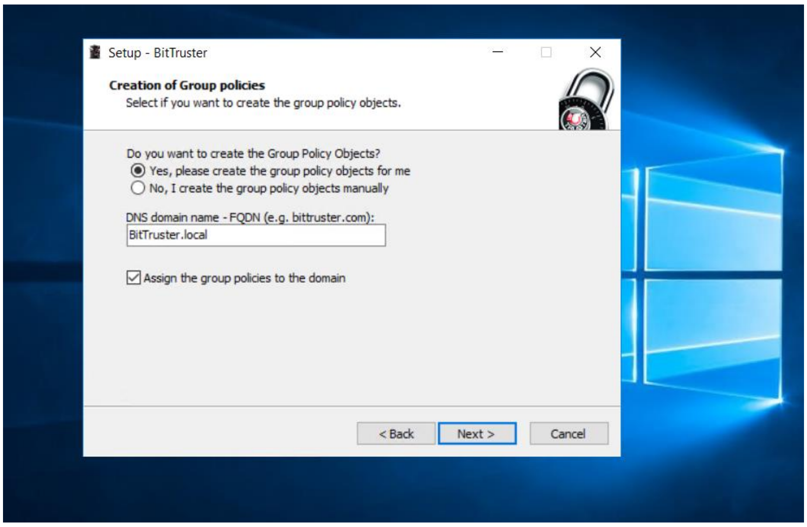
Password: •••••••••••

Read access to BitTruster.local

Use DOMAIN\U

Setup

Credentials sucessfully validated.



Setup - BitTruster

Creation of Group policies

Select if you want to create the group policy objects.

Do you want to create the Group Policy Objects?

● Yes, please create the group policy objects for me

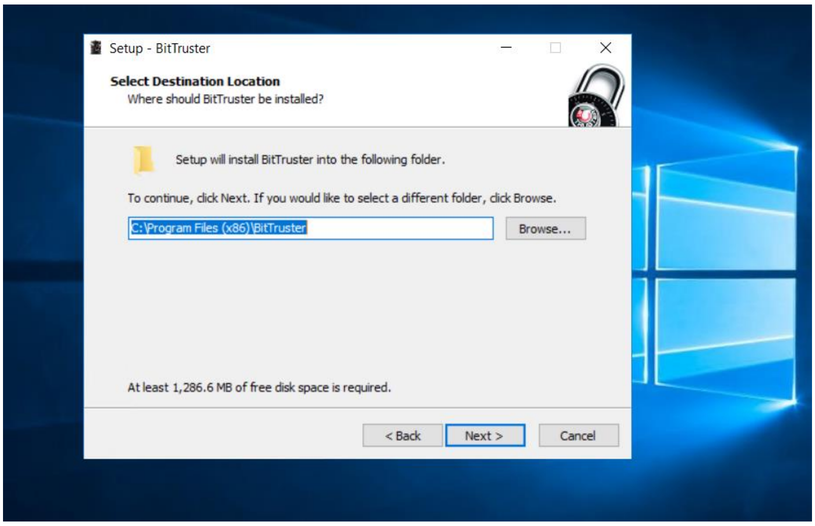
○ No, I create the group policy objects manually

DNS domain name - FQDN (e.g. bittruster.com):

BitTruster.local

☑ Assign the group policies to the domain

Make sure that the checkbox “Assign the group policies to the domain” is checked. This ensures that BitLocker is enabled in your environment and Firewall ports for WMI are open on the client side.



Setup - BitTruster

Select Destination Location

Where should BitTruster be installed?

Setup will install BitTruster into the following folder.

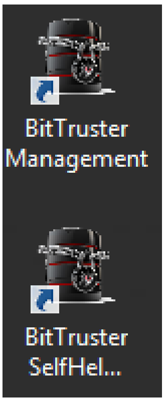
To continue, click Next. If you would like to select a different folder, click Browse.

C:\Program Files (x86)\BitTruster

At least 1,286.6 MB of free disk space is required.

Reboot the server

You should now see two BitTruster Icons on the desktop:



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3.Configuring BitTruster

Start BitTruster Management Center from the Desktop and login with any account from your domain. It is recommended to restrict access to the BitTruster Management (see Permissions)

3.1.E-Mail Server Settings

BitTruster leverages email to send out notifications like PIN change, passphrase changes, reports or TPM notifications to inform end user and administrators.
To configure the email settings please change to Settings tab from the navigation pane and select Email service in the top menu.
Configure the email address that should be used to send emails to the users.
Add a new E-Mail Server entry with appropriate credentials which are allowed to send out emails. Click on Save when finished with the configuration.

3.2.Test email configuration

To check if the email settings have been applied correctly, you can also use the “Test” button beside the Email Server configuration.
Just simply click on “Test” and wait for the “Send test email?” pop-up screen. Check if the email is correct and click on “Yes”. You should see the notification “Email has been sent successfully”.

3.3.Configuring Active Directory Sync

To import new computers to the Management Console BitTruster needs to be configured to import new computer objects from Active Directory. For this you can create a new AD-Connector.
Select “Synchronize” from the left navigation pane. Click “+” in “AD Import Paths” to add a new AD-Connector.
On the right side in the “AD Path Selection” section select the Organizational Unit that you want to import. Once you have selected the OU the LDAP path in the “Settings” section will change.
Click on “Save”. BitTruster will now import the computer objects from the configured OU. This can take a few minutes.
Go back to the Dashboard view. You should now see your OU and the corresponding computers in the dashboard overview.

3.4.Preparing the client computer

Logon to a client with an AD user that has an email address. The client should be part of the OU that has been imported into BitTruster before.
Open the TPM console (tpm.msc) as an administrator and check if the TPM is turned on and ready for use. If the TPM is not shown in the TPM console please check in BIOS if the TPM has been disabled.
Ensure that you logon interactively (no RDP session) otherwise the user is not added to the users list.

3.5.Check communication to the client computer

Before assigning a policy and encrypting a client please check that the BitTruster Server is already communicating to the client computer. For this please go to the dashboard in the management center and select the computer you want to encrypt. You should see some information about the computer in the “Info” tab.
If you see the note “Never successfully connected” BitTruster may not have not communicated with the computer yet.
You can trigger a manual status update to enforce the communication. For this click on the computer in the dashboard and switch to the “Actions” tab on the right detail pane. Click on the “Menu” button and select “Manual status update”. In the detail view you should now see a new entry for “Status update” that has the status “Pending” in the “Execution time”. Once the server has talked to the computer you should see “OK” in the “Last result” column and new computer information in the “Info” tab.
Please make sure that you can see user entries with a valid email address. BitTruster will send email notifications to these users.

If you see any error messages in the “Last result” pane the server cannot communicate to the clients correctly or something else is not configured correctly. The error message should give a good indication about the root cause. Otherwise you can check the troubleshooting steps in the appendix.

3.6.Encrypting a computer with “TPM only” Protection

Once the BitTruster Server established communication to the client you can now continue to prepare an encryption policy.
On the Management Center go to Dashboard and select the computer that you have prepared for testing. Once clicked you can see the detail view for this computer on the right side. Select “Policy” and change the setting from “Auto” to “Manual”. Select the policy for “manual TPM only” encryption. Click on “Save”.
The computer should start to encrypt after it has received the new policy. You can view progress in the ActionQueue of the computer: Click on the computer in the Dashboard and select “Actions” on the right detail pane. You can now see the action status of the selected computer.
Note: If you are receiving a 8 character passphrase at this point your TPM chip might not be configured correctly or is deactivated. Please check if it is turn on and enabled in the BIOS, if that’s done BitTruster will automatically switch to the more secure TPM+PIN state.

3.7.Encrypting a computer with “TPM+PIN” Protection

In the Management Center go to Dashboard and select the computer that you have prepared for testing. Once clicked you can see the detail view for this computer on the right side. Select “Policy” and change the setting from “Auto” to “Manual”. Select the policy for “manual TPM+PIN” encryption. You can do this while the computer is still encrypting. You don’t need to wait until the encryption is finished. Click on “Save”.
You should receive a notification email from BitTruster with your new 6 digit PIN number.

Reboot the computer. You will be prompted to type in your PIN number before the computer continues to boot up. Type in the the PIN Number and press “Enter”.

4.Recovery

Recovering PIN or Passphrase in the Management Center

If the user forgets the PIN or Passphrase of his computer you can easily recover this information in Management Center.
Go to the Management Center and select “Recovery” from the navigation pane on the left.
Type in the first letters of the computer that want to recover. If you only have the ProtectorIdentifier you need to change the search option in the search pane.
Once you selected the computer you see the computer information and the recovery options.
BitTruster shows only the recovery options which are available for this computer.
In our example the computer should now be protected with a PIN.
Click on the “Email” button in the “TPM+PIN” section. The “Send PIN” message pops up to inform you that an email has been sent out. BitTruster sends an email to all user that are assigned to this computer. Please verify that you have received the email with the PIN notification.
If the user is unable to receive emails you can use the “Show” option to tell him the PIN on the phone or any other way of communication. Click on “Show” in the “TPM+PIN” section.
The “TPM+PIN” message pops up with the corresponding PIN for this computer.

Note: When using “Show” option for any of the recovery sections BitTruster will trigger a change of the recovery information once for the next time it establishes a connection to the client computer. For PIN and Passphrase the users will be informed about the new login information via email once it has been changed.
Recovery key are always changed on usage, but will not trigger a notification.

4.1.Recovering PIN or Passphrase in the SelfHelp Portal

BitTruster offers a Self-Help Portal where users can login with their Active Directory credentials and do some recovery steps by their own but also change their login information (PIN/Passphrase) without interacting with the helpdesk.
Open an internet browser from another computer and type in:
https://\\HostameOfYourBitTrusterServer.
If you don’t know the correct URL of the SelfHelp Portal open the SelfHelp Portal from the BitTruster Server (icon on desktop) and check the URL.
Login in with your Active Directory credentials. Please note that the SelfHelp Portal only accepts logins from BitTruster users even if the login information is correct.
Once logged in you should now see all the computers that are assigned to you. Select the computer that you want to recover.

Click on “Show PIN” and approve that you want to see the PIN. You should now see the PIN of your computer.
Please note that BitTruster is not changing the PIN of your computer after you used “Shown PIN” in the SelfHelp Portal.

Note: BitTruster is using a Self-Signed Certificate per default. We recommend replacing this with an certificate from an internal CA.

4.2.Changing PIN or Passphrase in the SelfHelp Portal

The SelfHelp Portal also allows users to change their PIN or Passphrase without interacting with the HelpDesk
Please login to the SelfHelp Portal on the computer where you want to change the PIN or Passphrase. The computer must be able to be contacted by the BitTruster Server. Click on the computer in the SelfHelp Portal and select the “Change PIN” option. Type in your new PIN and click on “Set PIN”. Your PIN will now be changed and can be used on the next boot login.

4.3.Decrypting a computer

In the Management Center go to Dashboard and select the computer that you have prepared for testing. Once clicked you can see the detail view for this computer on the right side. Select “Policy” and change the setting from “Auto” to “Manual”. Select the policy for “manual decrypt” encryption. Click on “Save”.
The computer should start to decrypt after it has received the new policy. To view progress you can check the ActionQueue of this machine.

5.APPENDIX Troubleshooting

5.1.Error 2147023174 RPC Client not available.

BitTruster uses WMI to connect to clients. When receiving the error code -2147023174 it means that BitTruster could not connect to the client. This can have multiple reasons. Most of the time the client is offline and BitTruster will connect the next time the client is online. However, it's also possible that there are other reasons why the connection fails.
If the request just times out there's no reply which would allow to provide a more detailed error message. The same applies to firewalls, as firewalls - for good reasons - do not tell the questioning party that a package has been dropped it look like a timeout.

Issues that do **NOT** cause this issue:
Permissions - When a user is not having the required permissions BitTruster will show an appropriate error message.
DNS record pointing to a different client - When the DNS server points to a different machine than the actual client BitTruster will show a meaningful error message. Note this only applies if the DNS record points to a different client that is actually online. DNS is most of the time the root cause for this error.

To analyze the issue, follow these steps:

- Verify that the client is online and in a network segment that can be reached by the BitTruster server.
- Check DNS
    - Ensure you run the following commands from the BitTruster server
    - Ping the client using the FQDN, do no just use the hostname it can return different IP address in rare situations
    - Verify that the returned IP matches the client IP
- Check Firewall
    - When the DNS server returns the correct IP ensure that the Windows Firewall from the client accepts WMI in
    - Execute the following WMI command using the FQDN of the client:
    - *wmic /NODE:<clientname> /USER:<yourdomain\administrator> OS GET Name*
    - When using the Windows firewall ensure that the "BitTruster - Firewall settings" GPO has been applied to the correct OU and the client already retrieved the GPO
- Verify if the NETBIOS name is correct:
    - open a cmd prompt and run following command:
        - nbtstat -n
        - check the output for NETBIOS name where the Type = GROUP and Status = Registered
        - verify that you have the same NETBIOS entry in AD-Sync configuration in the BitTruster Management
- Verify the default gateway to ensure that the BitTruster server has a route to the client and vice versa.
    - From the BitTruster Server
        - *tracert <clientname>*
    - From the client
        - *tracert <BitTrusterServer>*

5.2.Troubleshooting -999 Access denied

Ensure the ActionWorker Account has proper privileges on the client, WMI service is running and the Firewall allows WMI(in).

BitTruster leverages WMI to manage BitLocker and TPM and on the client computer. In order to do that the BitTruster ActionWorker Service needs to have administrative privileges on the client computers. Typically, the ActionWorker Service runs with the same user that has been used during the installation of BitTruster. However, this can also be done with dedicated Service Account that can be created for BitTruster purposes only. This account needs to be added to the ActionWorker Service and to the local Administrators group on the clients or any other group that has local administrator privileges on the client.

Error 999 could mean that it’s either a permission issue, ie. the ActionQueueWorkerService does not have admin permissions on this particular client, or the WMI service is not running on the client or WMI is corrupt (you can run “winmgmt /verifyrepository” on the client to check this).

In most cases it’s an issue with the permissions that a user/group has been removed from the local Admin group on the client or is not part of the group anymore. It could also be an firewall issue but this is most likely with other firewall vendors than Microsoft. See also Troubleshooting -2147023174 RPC Client not available.

- Please check the service account that runs the ActionWorker Service on the BitTruster Server
- Please verify that this user has administrative privileges on the client computer that is showing this error.
- Please verify if the password of the service account has not been changed or expired.

If none of the above helped solving the problem, please contact us via BitTruster Support, support@bittruster.com .