# Exastro-ITA_(Reference) Configuration settings during installation

## 1. MariaDB(server.cnf) modification list

The following setting is designed for operation on MariaDB10.4 and the minimum spec of ITA system server※1(CPU: 2 core/ Memory 4GB)
**※1 ITA system server … The basic ITA configuration that associated drivers such as Ansible driver are built in other servers.**

| No. | Required/ For reference | Default value | After ITA installation | Remarks |
|---|---|---|---|---|
| 1 | Required | OFF | explicit_defaults_for_timestamp = true | |
| 2 | Required | latin1 | character-set-server = utf8 | |
| 4 | Required | REPEATABLE -READ | transaction-isolation=READ-COMMITTED | Specify the transaction isolation level. "READ-COMMITTED" is the default isolation level for many database systems(Oracle, PostgreSQL, SQL Server). The default isolation level of MariaDB is "REPEATABLE-READ", which doesn't match the usage policy of ITA. So it is required to be changed. |
| 3 | For reference | 128MB | innodb_buffer_pool_size = 512MB | Consider tuning depending on how to use ITA |
| 5 | For reference | 16MB | innodb_log_buffer_size=64M | Consider tuning depending on how to use ITA |
| 6 | For reference | 48MB | innodb_log_file_size=256M | Consider tuning depending on how to use ITA |
| 7 | For reference | 0 | min_examined_row_limit=100 | Consider tuning depending on how to use ITA |
| 8 | For reference | 256KB | join_buffer_size=128M | Consider tuning depending on how to use ITA |
| 9 | For reference | 1M | query_cache_size=512M | Consider tuning depending on how to use ITA |
| 10 | For reference | OFF | query_cache_type=1 | |
| 11 | For reference | 16MB | max_heap_table_size=64M | Consider tuning depending on how to use ITA |
| 12 | For reference | 16MB | tmp_table_size=64M | Consider tuning depending on how to use ITA |
| 13 | For reference | 256KB | mrr_buffer_size=64M | Consider tuning depending on how to use ITA |
| 14 | For reference | 151 | max_connections=256 | Consider tuning depending on how to use ITA |

## 1. MariaDB(server.cnf) modification list

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## 2. PHP(php.ini) modification list

The following setting is designed for operation on MariaDB10.4 and the minimum spec of ITA system server※1(CPU: 2 core/ Memory 4GB)

※1 ITA system server … The basic ITA configuration that associated drivers such as Ansible driver are built in other servers.

| No. | Required/For reference | Default value | After ITA installation | Remarks |
|---|---|---|---|---|
| 1 | For reference | output_buffering = 4096 | output_buffering = 8192 | Consider tuning depending on how to use ITA |
| 2 | For reference | expose_php = On | expose_php = Off | Modify the setting to hide PHP version |
| 3 | For reference | max_execution_time = 30 | max_execution_time = 600 | Consider the tuning if timeout occurs when using ITA |
| 4 | For reference | max_input_time = 60 | max_input_time = 600 | Consider the tuning if timeout occurs when using ITA |
| 5 | For reference | memory_limit = 128M | memory_limit = 512M | Consider the tuning if memory allocation is not enough for PHP when using ITA |
| 6 | For reference | post_max_size = 8M | post_max_size = 4096M | Consider the tuning if large capacity registered/updated can't be performed when using ITA |
| 7 | For reference | upload_max_filesize = 2M | upload_max_filesize = 4096M | Consider the tuning according to the file size that users want to upload in ITA |
| 8 | For reference | default_socket_timeout = 60 | default_socket_timeout = 600 | Consider tuning depending on how to use ITA |
| 9 | Required | ;date.timezone = | date.timezone = ″Asia/Tokyo″ | |
| 10 | For reference | pdo_mysql.cache_size = 2000 | pdo_mysql.cache_size = 4000 | Consider tuning depending on how to use ITA |
| 11 | Required | pdo_mysql.default_socket= | pdo_mysql.default_socket=/var/lib/mysql/mysql.sock | ITA uses PHP with PDO to connect to MySQL |
| 12 | For reference | mysql.cache_size = 2000 | mysql.cache_size = 4000 | Consider tuning depending on how to use ITA |
| 13 | For reference | mysql.connect_timeout = 60 | mysql.connect_timeout = 600 | Consider tuning depending on how to use ITA |
| 14 | Required | ;session.save_path = ″/tmp″ | session.save_path = ″/var/lib/php/session″ | The directory mentioned in the modification is required to be created in advance. The default directory(/tmp) is not recommended |
| 15 | Required | session.gc_divisor = 1000 | session.gc_divisor = 1 | Control garbage collection of PHP session file. According to the setting on the left with the combination of the default value session.gc_probability = 1, the session file that passed 12 hours or more is in 100% probability to be performed garbage collection. |
| 16 | Required | session.gc_maxlifetime = 1440 | session.gc_maxlifetime = 43200 | |
| 17 | Required | ;mbstring.language = Japanese | mbstring.language = Japanese | ※Uncomment |
| 18 | Required | ;mbstring.internal_encoding = | mbstring.internal_encoding = UTF-8 | ※Uncomment + Modify |
| 19 | Required | ;mbstring.http_input = | mbstring.http_input = auto | ※Uncomment + Modify |
| 20 | Required | ;mbstring.http_output = | mbstring.http_output = UTF-8 | ※Uncomment + Modify |
| 21 | Required | ;mbstring.encoding_translation = Off | mbstring.encoding_translation = Off | ※Uncomment |
| 22 | Required | ;mbstring.detect_order = auto | mbstring.detect_order = auto | ※Uncomment |
| 23 | Required | ;mbstring.substitute_character = none | mbstring.substitute_character = none | ※Uncomment |
| 24 | Required | ;openssl.cafile= | openssl.cafile=/etc/pki/tls/certs/exastro-it-automation-ja.crt | |
| 25 | Required | ;openssl.capath= | openssl.capath=/etc/pki/tls/certs/exastro-it-automation-ja.crt | |

# Exastro-ITA_(Reference) Configuration settings during installation
## 3. Ansible(ansible.cfg) modification list

| No. | Required/ For reference | Default value | After ITA installation | Remarks |
|---|---|---|---|---|
| 1 | Required | #inventory      = /etc/ansible/hosts | inventory      = /etc/ansible/hosts | ※Uncomment |
| 2 | Required | #remote_tmp     = ~/.ansible/tmp | remote_tmp     = ~/.ansible/tmp | ※Uncomment |
| 3 | Required | #forks          = 5 | forks          = 5 | ※Uncomment |
| 4 | Required | #poll_interval  = 15 | poll_interval  = 15 | ※Uncomment |
| 5 | Required | #sudo_user      = root | sudo_user      = root | ※Uncomment |
| 6 | Required | #transport      = smart | transport      = smart | ※Uncomment |
| 7 | Required | #module_lang    = C | module_lang    = C | ※Uncomment |
| 8 | Required | #gathering = implicit | gathering = implicit | ※Uncomment |
| 9 | Required | #host_key_checking = False | host_key_checking = False | ※Uncomment |
| 10 | Required | #sudo_exe = sudo | sudo_exe = sudo | ※Uncomment |
| 11 | Required | #timeout = 10 | timeout = 10 | ※Uncomment |
| 12 | Required | #ansible_managed = Ansible managed | ansible_managed = Ansible managed | ※Uncomment |
| 13 | Required | #deprecation_warnings = True | deprecation_warnings = False | ※Uncomment + Modify |
| 14 | Required | #action_plugins     = /usr/share/ansible/plugins/action | action_plugins     = /usr/share/ansible/plugins/action | ※Uncomment |
| 15 | Required | #callback_plugins   = /usr/share/ansible/plugins/callback | callback_plugins   = /usr/share/ansible/plugins/callback | ※Uncomment |
| 16 | Required | #connection_plugins = /usr/share/ansible/plugins/connection | connection_plugins = /usr/share/ansible/plugins/connection | ※Uncomment |
| 17 | Required | #lookup_plugins     = /usr/share/ansible/plugins/lookup | lookup_plugins     = /usr/share/ansible/plugins/lookup | ※Uncomment |
| 18 | Required | #vars_plugins       = /usr/share/ansible/plugins/vars | vars_plugins       = /usr/share/ansible/plugins/vars | ※Uncomment |
| 19 | Required | #filter_plugins     = /usr/share/ansible/plugins/filter | filter_plugins     = /usr/share/ansible/plugins/filter | ※Uncomment |
| 20 | Required | #fact_caching = memory | fact_caching = memory | ※Uncomment |
| 21 | Required | #ssh_args = -C -o ControlMaster=auto -o ControlPersist=60s | ssh_args = -o ControlMaster=auto -o ControlPersist=60s -o StrictHostKeyChecking=no -o UserKnownHostsFile=/dev/null | ※Uncomment + Modify |
| 22 | Required | #accelerate_port = 5099 | accelerate_port = 5099 | ※Uncomment |
| 23 | Required | #accelerate_timeout = 30 | accelerate_timeout = 30 | ※Uncomment |
| 24 | Required | #accelerate_connect_timeout = 5.0 | accelerate_connect_timeout = 5.0 | ※Uncomment |
| 25 | Required | #accelerate_daemon_timeout = 30 | accelerate_daemon_timeout = 30 | ※Uncomment |

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## 4 . ITA setting file description

| No. | Installed system/associated driver | | | | | | Setting file name | Description |
|---|---|---|---|---|---|---|---|---|
| | ITA-BASE | Ansible | Cobbler | OpenStack | DSC | AnsibleTower | | |
| 1 | | | ○ | | | | (ITA installed directory)/ita-root/confs/backyardconfs/cobbler_driver/path_DATA_RELAY_STRAGE_side_Cobbler | Define the root path of data relay storage in Cobbler server |
| 2 | ○ | | | | | | (ITA installed directory)/ita-root/confs/backyardconfs/ita_base/data_portability_running_limit.txt | The execution time limit of data portability import process.<br>The process during execution will be determined as failed if the execution time passed the setting value.<br>The unit is second.Default value is 300 |
| 3 | ○ | ○ | | | ○ | ○ | (ITA installed directory)/ita-root/confs/backyardconfs/ita_base/hide_menu_column_list.txt | Describe the column to be excluded from the item display of substitution auto-registration setting.<br>The line starting with "#" is ignored. |
| 4 | ○ | ○ | ○ | ○ | ○ | ○ | (ITA installed directory)/ita-root/confs/backyardconfs/ita_env | Describe the log level of backyard function and the root directory(ita-root) of ITA |
| 5 | ○ | ○ | ○ | ○ | ○ | ○ | (ITA installed directory)/ita-root/confs/backyardconfs/path_PHP_MODULE.txt | Describe the path of PHP module.<br>Example: /bin/php |
| 6 | ○ | | | | | | (ITA installed directory)/ita-root/confs/backyardconfs/sysmail.list | Describe the setting when using system mail(ky_mail).<br>※Not required if the mail sending function(ky_mail) of ITA is not used. |
| 7 | | ○ | | | | ○ | (ITA installed directory)/ita-root/confs/commonconfs/ansible_vault_accesskey.txt | The password of ansible-vault command.<br>The behavior of password changing is guaranteed only right after ITA is installed.<br>Behavior is not guaranteed when changing password while system is operating or exporting/importing menus to environments whose password are the same.<br><br>Example: The string encrypted from "ANSIBLE-VAULT-PASSWORD"<br>Refer to ※1 for the encryption specification |
| 8 | ○ | | | | | | (ITA installed directory)/ita-root/confs/commonconfs/app_mail_from.txt | When using system mail (ky_mail) from WebDBCore, the file content becomes the sender's address.<br>※In the case of sending mail to 00_loadtable.php when action occurs.<br>※Not required if the mail sending function(ky_mail) of ITA is not used. |
| 9 | ○ | ○ | | | ○ | ○ | (ITA installed directory)/ita-root/confs/commonconfs/app_msg_language.txt | Define the language of ITA. |
| 10 | ○ | ○ | ○ | ○ | ○ | ○ | (ITA installed directory)/ita-root/confs/commonconfs/db_connection_string.txt | The string to connect to MySQL.<br>Example: The string encrypted from "mysql:dbname=ITA_DB;host=localhost"<br><br>Refer to ※1 for the encryption specification |
| 11 | ○ | ○ | ○ | ○ | ○ | ○ | (ITA installed directory)/ita-root/confs/commonconfs/db_model_string.txt | Define the type of RDB<br>0 : OracleDB<br>1 : MySQL/MariaDB |
| 12 | ○ | ○ | ○ | ○ | ○ | ○ | (ITA installed directory)/ita-root/confs/commonconfs/db_password.txt | The password to connect to MySQL.<br>Example: The string encrypted from "ITA_PASSWD"<br><br>Refer to ※1 for the encryption specification |
| 13 | ○ | ○ | ○ | ○ | ○ | ○ | (ITA installed directory)/ita-root/confs/commonconfs/db_username.txt | The user to connect to MySQL.<br>Example: The string encrypted from "ITA_USER"<br><br>Refer to ※1 for the encryption specification |
| 14 | ○ | ○ | | | | ○ | (ITA installed directory)/ita-root/confs/commonconfs/path_ANSIBLE_MODULE.txt | Describe the path where ansible commands are installed(ansible-playbook/ansible-vault)<br>This sample describes "/usr/local/bin" |
| 15 | ○ | ○ | | | | ○ | (ITA installed directory)/ita-root/confs/commonconfs/path_PHPSpyc_Classes.txt | Describe the path of Spyc.<br>This sample describes "/usr/share/php/spyc-master" |
| 16 | | ○ | | | | | (ITA installed directory)/ita-root/confs/restapiconfs/ansible_driver/accesskey.txt | The access key used in the RestAPI of Ansible server.<br>Example: The string encrypted from "AccessKeyId"<br><br>Refer to ※1 for the encryption specification |
| 17 | | ○ | | | | | (ITA installed directory)/ita-root/confs/restapiconfs/ansible_driver/secret_accesskey.txt | The secret key used in the RestAPI of Ansible server.<br>Example: The string encrypted from "SecretAccessKey"<br><br>Refer to ※1 for the encryption specification |
| 18 | | ○ | | | | | (ITA installed directory)/ita-root/confs/restapiconfs/ansible_driver/ansible_playbook_watch_time.txt | Describe the period for the RestAPI of Ansible server to check if ansible-playbook command is operating. (Unit: Millisecond)<br>In this period, maximum operation check performed is 3 times.<br>Example: "10" |
| 19 | ○ | | | | | | (ITA installed directory)/ita-root/confs/commonconfs/admin_mail_addr.txt | Describe the contact information (e-mail address) of the system administrator.<br><br>If the file doesn'exist<br>⇒The link of "Contact administrator" will disappear |
| 20 | ○ | | | | | | (ITA installed directory)/ita-root/confs/webconfs/ExternalAuthSettings.ini | Describe the information of the association target of ActiveDirectory. |
| 21 | ○ | | | | | | (ITA installed directory)/ita-root/confs/webconfs/path_HTML_AJAX.txt | Describe the path of HTML_AJAX.<br>Example: /usr/share/pear/ |
| 22 | ○ | ○ | ○ | ○ | ○ | ○ | (ITA installed directory)/ita-root/confs/webconfs/path_PhpSpreadsheet.txt | Describe the path of Phpspreadsheet.<br>This sample: "/usr/share/php" |

※1 The value encoded by base64 then converted by rot13