Dynatrace Web Synthetic Monitoring

APMaaS Reseller Dashboard - ARD

Please direct questions about APMaaS Reseller Dashboard or comments on this document to:

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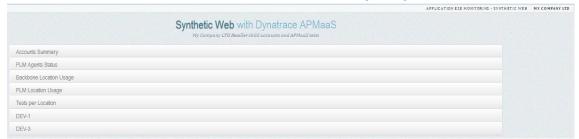
Preface

The APMaaS Reseller Dashboard (ARD) monitors Dynatrace APMaaS highlighting:

- Daily, APMaaS configuration changes
- Hourly, test faults
- Hourly, application
 - Availability issues
 - o Performance threshold breaches
- Half hourly PLM Agent status

APMaaS Reseller Dashboard is auto configurable.

Introduction to APMaaS Reseller Dashboard (ARD)



APMaaS Reseller Dashboard consists of various tables glued together into one expandable harmonium, where first two tables expand by default:

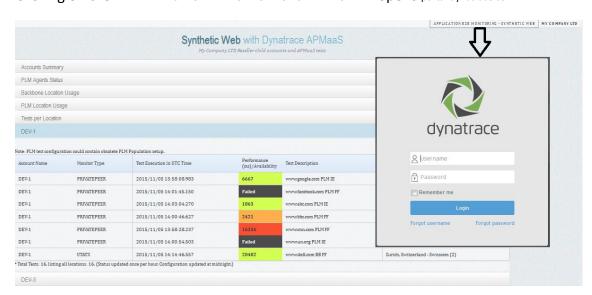
- 1. Accounts Summary
- 2. PLM Agents Status

The rest of the tables are imploded with visible table title only:

- 1. Backbone Location Usage
- 2. PLM Location Usage
- 3. Tests per Location
- 4. Child Account Details 1
- 5. Child Account Details 2
- 6. ...

APPLICATION E2E MONITORING - SYNTHETIC WEB

Clicking on the link "APPLICATION E2E MONITORING – SYNTHETIC WEB" Opens portal.dynatrace.com



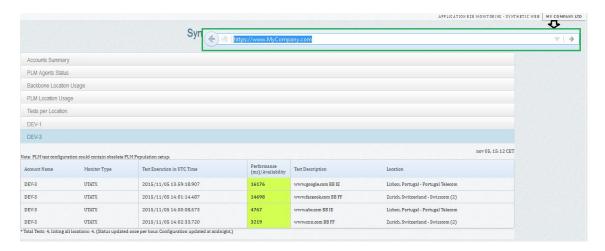
Text "APPLICATION E2E MONITORING – SYNTHETIC WEB " is set in file "ZAPMaaS_param_local.sh", variable:

[&]quot;HTML_HEADER_TITLE" and URL link to open portal.dynatrace.com is set in variable:

[&]quot;HTML HEADER TITLE URL".

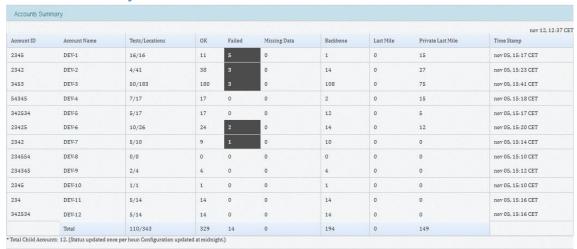
MY COMPANY LTD

Clicking on the link "MY COMPANY LTD", opens MyCompany's URL



Text "MY COMPANY LTD" is set in "ZAPMaas_param_local.sh", variable: "HTML_HEADER_COMPANY" and URL link is set in variable: "HTML_HEADER_COMPANY_URL".

Accounts Summary



All configured Reseller's child accounts are listed in this table, together with number of configured tests/locations per child account and the last known test execution status summary.

Tests which are not performed due to: test being inactivated, configured node gone inactive, etc, will be removed from the ARD configuration after three days (as set in variable: "DISTANCE_TEST_EXECUTED_FROM_SITE_TO_IGNORE").

Private Last Mile Agents Status



This table lists status of Private Last Mile agents installed within your company network. Column "Distance in minutes" shows how long from "now", Private Last Mile agent registered a heartbeat with Dynatrace server. If the PLM Agent has not produced a heartbeat within last sixty minutes, as defined in variable

"HTML_PLM_CHECKIN_DISTANCE_TO_HIGHLIGHT", dashboard will:

- 1. Highlight in red column "Distance in minutes" and
- 2. Envelope Email link will become available for click

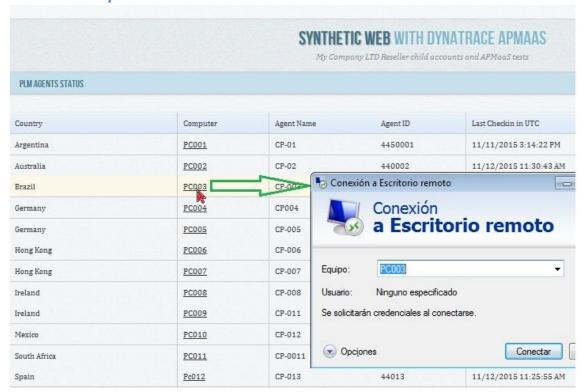
It is also possible to manually flag Countries for highlighting (in amber), as defined in pipe separated variable "html_plm_country_to_highlight". This is useful as a reminder when a country action is pending.

Email local Private Last Mile Agent support



Clicking on the envelope in "Distance in Minutes", an Email will open with standard text template as above, which is set in file: "ZAPMaaS_htmlFunctions.sh", variable: "HTML_EMAIL".

Remote Desktop Connection



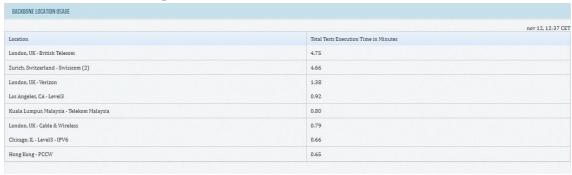
When remote desktop connect (rdp) file exists, clicking on the Computer name, Remote Desktop Connection Manager will open for that computer. Rdp files are located at: "http://www.myCompany.com/rdp/typeComputerNameHere.rdp".

Rdp file

Each RDP file should be named as "ComputerName.rdp", where ComputerName is the value you get when at the command prompt you type hostname, and then press Enter. Modify "typeMyIPHere" with real Computer IP.

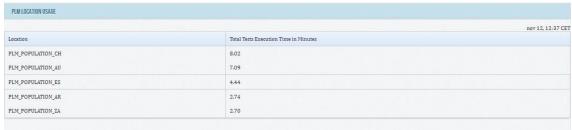
```
$file = 'screen mode id:i:2
desktopwidth:i:1436
desktopheight:i:925
session bpp:i:16
auto connect:i:1
full address:s:typeMyIPHere
compression:i:1
keyboardhook:i:2
audiomode:i:2
redirectdrives:i:0
redirectprinters:i:0
redirectcomports:i:0
redirectsmartcards:i:0
displayconnectionbar:i:1
alternate shell:s:
shell working directory:s:
disable wallpaper:i:1
disable full window drag:i:1
disable menu anims:i:1
disable themes:i:1
bitmapcachepersistenable:i:1
winposstr:s:0,3,0,0,800,600
redirectclipboard:i:1
redirectposdevices:i:0
drivestoredirect:s:
autoreconnection enabled:i:1
authentication level:i:0
prompt for credentials:i:0
negotiate security layer:i:1
remoteapplicationmode:i:0
allow desktop composition:i:0
allow font smoothing:i:0
disable cursor setting:i:0
domain:s:EZCORP
username:s:W989136
gatewayhostname:s:
gatewayusagemethod:i:0
gatewaycredentialssource:i:4
gatewayprofileusagemethod:i:0';
header("Content-Disposition: attachment; filename=filename.rdp");
header("Content-Type: application/rdp");
print $file;
exit();
```

Backbone Location Usage



This table lists configured backbone nodes in use and its current total usage in minutes.

Private Last Mile Location Usage



This table lists configured private last mile nodes in use and its current total usage in minutes.

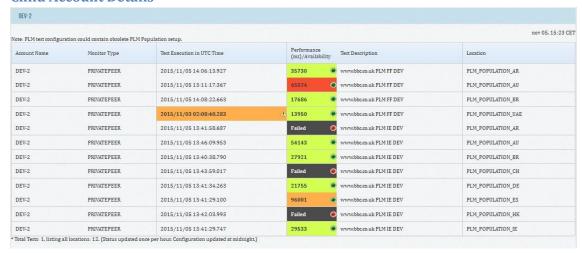
Tests per Location



This table lists configured tests in use per child account and nodes.

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Child Account Details



Each Child Account test details are listed in a separate table showing last test execution with color coded availability and performance data.

For data older than four hours, as set in variable "html_test_execution_distance_to_highlight", column "test execution in utc time" is highlighted in amber.

Child Account Details Public Chart



It is possible to prepare Dynatrace Standard Public Charts and store it's URLS in remote desktop connect files "...config\Charts\APMaaS.chart.cfg".

AccountID|AccountName|TestType|TestID|TestName|NodeID|NodeName|PublicChartURL
-----227|DEV-1|PRIVATEPEER|740|APP44 www.trufa.com PLM IE DEV1|283|PLMP_USA|http://www.gomeznetworks.com/LastMile/reloadPage.asp?crypt=%7F%B3%AC%B2%C8%96%86u

If GomeNetworks URL exists, clicking on the column "Test Description", Dynatrace Public Chart will open for the test.

Note: Previously, it is necessary to create a Dynatrace Public Chart for each test and node for the last 24h period.

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Downloading and Installing the APMaaS Reseller Dashboard (ARD)

The APMaaS Reseller Dashboard is available in the Dynatrace Forums page of the Dynatrace Portal (https://answers.dynatrace.com/spaces/152/index.html), with direct links at:

- https://answers.dynatrace.com/questions/139897/dynatrace-web-synthetic-monitoring-apmaas-reseller.html
- https://github.com/pebla/ARD/tree/master/dynaTraceArd

ARD main goal is to produce and keep updated one dashboard http page showing current Dynatrace APMaaS installation for selected logins, and its status.

ARD consists of Linux Bash executables, configuration and other scripts.

It was developed and tested on Cygwin 64bit version 2.850.

For its proper functioning, requires:

- 1. Linux operating system (for example: Cygwin) with working:
 - a. bash 4
 - b. awk, basename, cat, curl, cut, date, echo, egrep, find, grep, head, kill, mkdir, mv, printf, read, rm, sed, sleep, sort, touch
- 2. Linux user
- 3. Local web server (for example: Apache)
- 4. Write access to the web server's htdocs directory for the Linux user
- 5. Task Scheduler (for example: Windows AT or cron)
- 6. Internet access (with or without proxy)

Prerequisites:

There are few things to get right before starting.

portal.dynatrace.com requisites

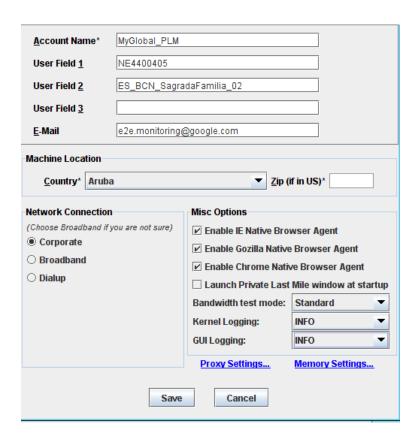
- For Dynatrace Resellers: If you have multiple Dynatrace APMaaS child accounts and you wish to share your PLM Agents across all of your APMaaS child accounts you will have to:
 - 1.1. Not create APMaaS child account PLM Networks yourself
 - 1.2. Ask Dynatrace support to create one common PLM Network for your Reseller and share that PLM Network across all of your APMaaS child accounts. This is one off task
 - 1.3. Create a new APMaaS child account
 - 1.4. To add this new APMaaS child account to the existing Reseller's PLM network, ask Dynatrace support not to create a new PLM Network but to add your newly created APMaaS child account to your existing Reseller PLM Network,

- created above in the item 1.2 Repeat this every time when adding a new APMaaS child account.
- 2. If you do not have a Dynatrace Reseller and have no multiple APMaaS child accounts, ask Dynatrace support to create one PLM Network for you.
- 3. In Dynatrace Portal, follow your login naming convention to create a read-only WebServices API login. For example if:
 - 3.1. APMaaS (child) account name is: "FooMontgomery"
 - 3.2. Read-only WebServices API login could be named as: "Foo.API"
- 4. Manually login with your API account at least once into the newly created APMaaS (child) account. There might be few steps to fill out on the first login attempt
- 5. Test WebServices API, for example adjust for your credentials and then copy, paste and execute following URL from your web browser:
 - 5.1. https://gpn.webservice.gomez.com/AccountManagementWS 20/AccountManagementWS.asmx/GetAccountConfigPackage?sUsername=typeYourLoginWeb

 ServicesAPILoginHere&sPassword=typeYourPasswordHere
 - 5.2. The above web request should **not** return "<eStatus>STATUS_FAILED</eStatus>", if it does you cannot proceed but must:
 - 5.2.1. Check your login/password is correct
 - 5.2.2. Manually login into http://portal.dynatrace.com with using the same WebServices API login credentials as in test 5.1
 - 5.2.3. Check with Dynatrace support and make sure your Dynatrace WebServices API is enabled for the newly created APMaaS (child) account

PLM Agent configuration

Private Last Mile agent has its own configuration, following is the best practice:



- "User Field 1" in the PLM Agent Preferences must be the same as the PLM computer name
- 2. "User Field 2" in the PLM Agent Preferences should identify PLM Agent location, for example: "ES BCN SagradaFamilia 02" would indicate:
 - 2.1. PLM Agent is from Spain Barcelona
 - 2.2. From suburb Sagrada Familia
 - 2.3. Indicates this is second agent in this location
- 3. By default, Dynatrace PLM Agent will auto identify its Machine Location Country and Zip code using its source IP address. If you get to internet from a proxy, Dynatrace auto identity is not what you want. Ask Dynatrace Support to modify your account to allow PLM Agent to provide its Country and Zip code details as input source to the PLM Agent Machine Location.
- 4. For the rest of the PLM Agent configuration, follow Dynatrace Private Last Mile Administration Guide.

Scripts to customize

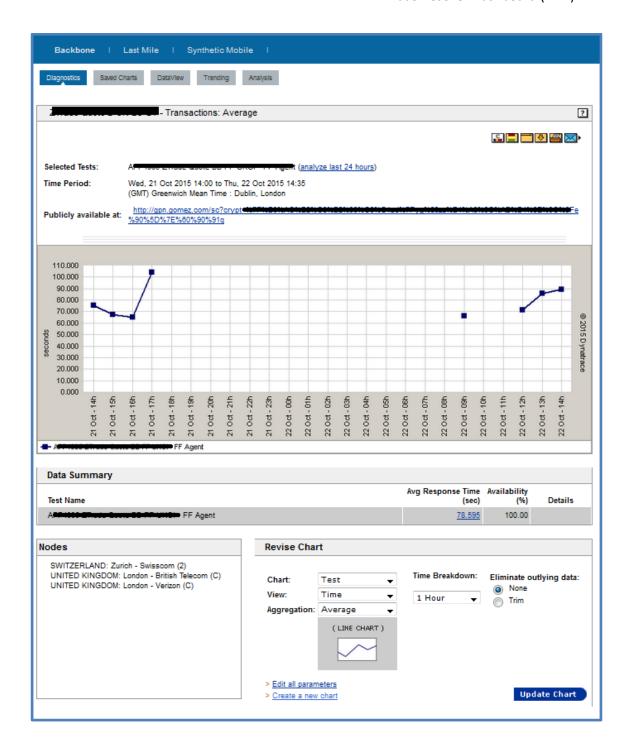
- "\${HOME}/dynaTrace/bin/ZAPMaaS_param_local.sh", modify this script to adjust for your specific installation
- 2. "\${HOME}/dynaTrace/config/PLM/Login/.proxy_ip_port", contains one line with pipe separated "Proxy IP|Proxy Port" identifying proxy server to use to get to internet. Leave this file blank in case you have direct internet access

- 3. "\${HOME}/dynaTrace/config/PLM/Login/.passwd_proxy", contains one line with pipe separated "Domain|Login|Password" which is used for proxy authentication. Leave this file blank if your proxy requires no authentication or you have no proxy
- 4. "\${HOME}/dynaTrace/config/PLM/Login/.passwd_compuware", contains one line per existing WebServices APMaaS child account credentials. Logins correspond to Dynatrace WebServices API and are pipe separated as "Login|Password". These credentials are used to login into Dynatrace via WebServices and to download APMaaS configuration and test performance data for the APMaaS child accounts
- 5. Optional: "\${HOME}/dynaTrace/config/PLM/Email/*", create two files for every existing PLM agent with a list of comma separated Email addresses of your local PLM company support. These Email addresses will be placed in "TO" and "CC" when ARD detects a PLM Agent which is not sending heartbeat to Dynatrace Gomez PLM Network. File naming convention is as:
 - 5.1. "email.TO.\${PLMComputerName}",
 - 5.2. "email.CC.\${PLMComputerName}"
 Replace \${PLMComputerName} with your PLM Agent Computer name, for example, if PLM Agent computer name is BCN095, create two files:
 "email.TO.BCN095" and "email.CC.BCN095"

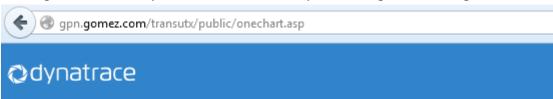
If Dynatrace doesn't receive PLM Agent heartbeat within one hour [defined by configuration parameters \${html_plm_checkin_distance_to_highlight}], ARD will color code that PLM Agent in red [\${html_plm_checkin_distance_to_highlight_color}] and will enable a clickable icon in form of an envelope, which when clicked will create an Email to your local PLM computer company support contacts, asking for support.

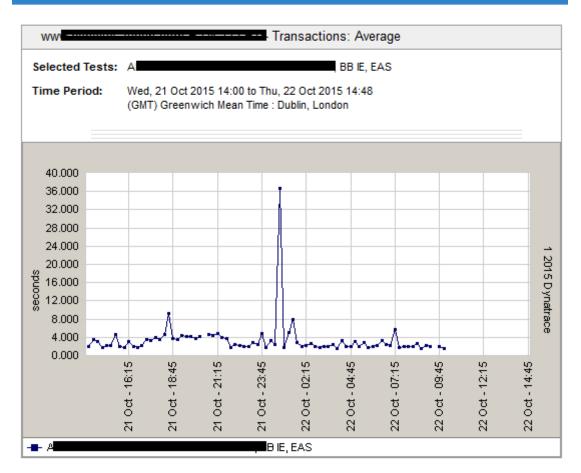
6. Optional: "\${HOME}/dynaTrace/config/Charts/APMaaS.chart.cfg", contains one line per test/location in format:

"accountID|accountName|testType|testID|testName|locationID|locationName|URLWithPubliclyAvailableChart". Having APMaaS.chart.cfg up to date lets you view the latest test APMaaS collected performance data straight from ARD without logging into Dynatrace. To get URL with publicly available chart, go to http://www.gomeznetworks.com and create a Chart, save it and open the saves Chart. Copy "Publicly available at" into APMaaS.chart.cfg



Clicking on the "Publicly available at" URL link, you would get something like:









First run

After setting first four mandatory items in "Scripts to customize", run ARD manually for the first time. Bash source in "../dynaTrace/bin/ZAPMaaS_Functions.sh" and manually run "init APILogin", which will create initial structure.

- 1. Open a terminal window
- 2. bash
- 3. cd \${HOME}/dynaTrace/bin
- 4. .ZAPMaaS_Functions.sh
- 5. init typeAPILoginHere

Note: API Login corresponds to the first row first and first column in file "\${HOME}/dynaTrace/config/Login/.passwd_compuware"

How to start ARD

Create a scheduled task to execute every fifteen minutes, 24x7 at: 0, 15, 30 and 45 minute of hour.

Run command from your working directory, which in case of Cygwin could be: "c:\cygwin64\bin"

Run following command: c:\cygwin64\bin\bash.exe

With arguments: -I-c "/home/pa045800/dynaTrace/cron/CronJob.sh >> /tmp/CronJob.log 2>&1; exit"

Enable: "Run whether user is logged on or not" and "Do not store password..."

ZAPMaaS_param.sh

Home directory for ARD is set to:

homeDir="\${HOME}/dynaTrace"

If your home directory is different, adjust it in ZAPMaaS_param.sh

Naming conventions

WebService API Login

Dynatrace login should be of type "Prefix+Dot+LoginName":

- Prefix could be a short name of your APMaaS child account. For example, if the
 account name is: "FooMontgomery", you could prefix all your logins with "Foo" for
 the account name
- 2. Followed by a dot
- 3. Followed by a Login name
- 4. Resulting in a Login: "Foo.API"
- 5. All logins should have the same prefix, for example ending in ".API" as above

PLM Agent local company support Email addresses

PLM Agent local company support Email addresses should be stored in two files per existing PLM Agent, of type:

- "email.TO.\${PLMComputerName}"
- 2. "email.CC.\${PLMComputerName}"

The only variable is the PLM Computer Name. If that is "BCN095", file should carry name of "email.TO.BCN095".

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Acronyms

PLM - Private Last Mile

APMaaS - Application Performance Management as a Service

ARD - APMaaS Reseller Dashboard