

DevTest ACL, User Types, Activity Reports, and Usage Audit Reports

Daniel Mazzei, Associate Engineering Services Architect

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Authentication vs. Authorization

Authentication vs. Authorization

■ Authentication

- Did the user provide valid login credentials?
- Verify user against DevTest ACL or external LDAP/AD server
- Can be used as “single sign on” to eliminate the need for DevTest Admin to manage users manually and have users remember different passwords

■ Authorization

- Is the user allowed to perform this task?
- Role-based
- Roles defined by DevTest Admin for each user
- Users can be assigned multiple roles
- Ex: QA Manager can create and execute test cases, but not Virtual Services

Usage Scenarios

Usage Scenarios

1. Authenticate with LDAP/AD and manage user roles in DevTest
 - Default option
2. Authenticate with LDAP/AD and manage user roles with mapped LDAP groups (and reject unmapped users)
 - DevTest Admin needs to manually add users to roles
3. Authenticate with LDAP/AD and manage user roles with mapped LDAP groups (and allow unmapped users to be assigned a default role)
 - DevTest Admin can manually “promote” users

<https://docops.ca.com/devtest-solutions/9-5/en/administering/security/access-control-acl/acl-configuration-scenarios>

Configure Authentication & Authorization

Configure Authentication Providers

- You can configure access control so that user authentication is based on:
 - One or more LDAP servers
 - The DevTest database
 - LDAP servers and the database
- If LDAP successfully authenticates the user and the user does not exist in the database, the user can be automatically added to the database
- Edit the *authentication-providers.xml* file in the home directory
 - Depending on configuration scenario, configure two properties files...

<https://docops.ca.com/devtest-solutions/9-5/en/administering/security/access-control-acl/configure-authentication-providers-for-acl>

Authenticate using authentication-providers.xml

```
<?xml version="1.0" encoding="UTF-8" ?>
```

```
<authentication-providers>
```

```
<!--
```

```
<authentication-provider
```

```
  name="ACME CORP LDAP Authentication Module"
```

```
  autoAddusers="true"
```

```
  authenticateOnly="false"
```

```
  enabled="true"
```

```
  type="LDAP"
```

```
  defaultRole="SV Power"
```

```
  rejectUnmappedUsers="true">
```

```
    <url>ldaps://server.name.com</url>
```

```
    <user-dn>cn=SVGROUP1,ou=internal,O=acme</user-dn>
```

```
    <user-password>{cry}ebd6c7adb6febfe8182c969a47adf02a</user-password>
```

```
    <user-dn-pattern>cn={0},ou=internal,O=acme</user-dn-pattern>
```

```
    <user-search-base>O=acme</user-search-base>
```

```
    <user-search-filter>(&amp;(objectClass=person)(cn={0}))</user-search-filter>
```

```
    <group-search-base>ou=groups,O=acme</group-search-base>
```

```
    <group-search-filter>(member={0})</group-search-filter>
```

```
  </authentication-provider>
```

```
</authentication-providers>
```


Authorize Users Authenticated by LDAP

```
<?xml version="1.0" encoding="UTF-8" ?>

<mappings>
  <!--
    <mapping role="Super User">
      <groupDN>cn=svSupport,ou=groups,O=acme</groupDN>
    </mapping>
    <mapping role="DevTest Administrator">
    </mapping>
    <mapping role="Test Administrator">
    </mapping>
    <mapping role="System Administration">
    </mapping>
    <mapping role="PF Power">
    </mapping>
    <mapping role="SV Power">
      <groupDN>cn=svAdmins,ou=groups,O=acme</groupDN>
    </mapping>
    <mapping role="Test Power">
    </mapping>
    <mapping role="Runtime">
    </mapping>
    <mapping role="Test Runner">
    </mapping>
    <mapping role="Test Observer">
    </mapping>
    <mapping role="Load Tester">
    </mapping>
    <mapping role="User">
    </mapping>
    <mapping role="Guest">
    </mapping>
  </mappings>
```

- Use the *ldap-mappings.xml* file in the DevTest home directory to assign default roles to groups of LDAP users
- Required for usage scenario option #3

<https://docops.ca.com/devtest-solutions/9-5/en/administering/security/access-control-acl/authorize-users-authenticated-by-ldap>

Users & Roles

Manage Users and Roles

- DevTest has default “users,” each with an assigned “role.”
- Each “role” is associated with a unique set of “permissions.”
- Administrators can manage users and roles from the Access Control option in the DevTest Portal
 - Add users/roles
 - Change the details (including name and password) for a user/role
 - Copy a user/roles
 - Delete users/roles

<https://docops.ca.com/devtest-solutions/9-5/en/administering/security/access-control-acl/manage-users-and-roles/add-and-update-roles>

Manage Users

DevTest Portal

Current Project: Bank v5 | admin

Home | Create | Manage | Monitor | Application Insight | Reporting | Settings | Agents | Access Control | Roles | Users | Resource Groups | Resources

Users

Add User | Delete User(s) | Last Refreshed: 12/06/2016 2:11:11 PM

Action	User ID	Name	Description
<input type="checkbox"/>	admin		
<input type="checkbox"/>	calpower		
<input type="checkbox"/>	devtest		
<input type="checkbox"/>	devst		
<input checked="" type="checkbox"/>	svpower		
<input type="checkbox"/>	sysadmin		
<input type="checkbox"/>	tpower		

1 - 7 of 7 items

15 items per page

User Profile: svpower

*User ID: svpower

Name: Name

Description: Description

Roles

Available (12)

Type your filter

Super User

DevTest Administrator

Test Administrator

System Administration

CAI Power

Test Power

Runtime

Test Runner

Test Observer

Load Tester

User

Guest

Assigned (1)

Type your filter

SV Power

Registry: mazda03N53051:2010 | Version: 9.5.1

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Standard User Accounts

- DevTest has standard (default) user accounts, each with an assigned role and user type
- Examples include:
 - Admin: The admin user has the Super User role, a CAI Power User and SV Power User combination user type. The default password is admin.
 - SVpower: The svpower user has the SV Power role, an SV Power User user type. The default password is svpower.
 - Sysadmin: The sysadmin user has the System Administrator role. The default password is sysadmin.

<https://docops.ca.com/devtest-solutions/9-5/en/administering/security/access-control-acl/standard-users>

Manage Roles

DevTest Portal | Home | Users | **Roles** | Last Refreshed: 12/06/2016 2:12:53 PM

Role Information - Runtime

Name: Runtime
Description: Runtime
All Effective User Types: Runtime User (R), Administration User (A), CAI Power User (CAIP)

Permissions | Users in Role | Resource Groups in Role

Available

- ☐ User and Role Administration (A)
- ☐ Resource Administration (A)
- ☐ Virtual Services Administration
- ☐ DevTest Server Administration
- ☐ Metric/Event Administration
- ☐ CAI Administration
- ☐ DevTest Workstation

Assigned

- ☐ Test/Suite Administration
 - ☐ Stage Test (R) Unlimited -1
 - ☐ Stage Suite (R) Unlimited -1
 - ☐ Stop Test (R)
 - ☐ Kill Test (R)
 - ☐ Optimize Test (R)
 - ☐ View Test (R)
 - ☐ Quick Stage Test (R)
 - ☐ Stage Local Suite (R)
- ☐ Virtual Services Administration
- ☐ DevTest Server Administration
- ☐ CVS Administration
- ☐ Report Administration
- ☐ CAI Administration
- ☐ DevTest Workstation

Action	Name	Effective User Type
<input type="checkbox"/>	Super User	SV Power User (SVP), CAI Power User (CAIP)
<input type="checkbox"/>	DevTest Administrator	SV Power User (SVP), CAI Power User (CAIP)
<input type="checkbox"/>	Test Administrator	SV Power User (SVP)
<input type="checkbox"/>	System Administration	
<input type="checkbox"/>	CAI Power	CAI Power User (CAIP)
<input type="checkbox"/>	SV Power	SV Power User (SVP)
<input type="checkbox"/>	Test Power	Test Power User (TP)
<input type="checkbox"/>	Runtime	CAI Power User (CAIP)
<input type="checkbox"/>	Test Runner	SV Power User (SVP)
<input type="checkbox"/>	Test Observer	Runtime User (R)
<input type="checkbox"/>	Load Tester	Runtime User (R)
<input type="checkbox"/>	User	Runtime User (R)
<input type="checkbox"/>	Guest	Runtime User (R)

1 - 13 of 13 items

Registry: mazda03N53051:2010 | Version: 9.5.1

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Standard Users and Standard Roles

- DevTest has standard (default) user types with associated roles. Each role is associated with a unique set of permissions.
- You can change the permissions that DevTest assigns to a standard role and delete them as well.
- Examples include:
 - SV Power User (Test Administrator, SV Power, and Test Runner roles)
 - Test Power User (Test Power, Test Observer, Load Tester, and User roles)

<https://docops.ca.com/devtest-solutions/9-5/en/administering/security/access-control-acl/standard-user-types-and-standard-roles>

Standard Permissions

- A permission controls whether a user can perform a specific action
- If a parent permission is allowed, then all its child permissions are allowed
- Standard top-level permissions are automatically created
- Examples include:
 - User and Role Administration Permission
 - Resource Administration Permission
 - Test/Suite Administration Permission
 - Report Administration Permission

<https://docops.ca.com/devtest-solutions/9-5/en/administering/security/access-control-acl/standard-permissions>

User Activity Report

User Activity Report

- The User Activity report contains a series of entries for user activities that the ACL controls
- You access the report from the Administration window. Open the window by selecting Reporting → Administration from the left navigation menu
- System administrators can search and filter the report for a specific event and user

<https://docops.ca.com/devtest-solutions/9-5/en/administering/security/access-control-acl/manage-users-and-roles/user-activity-report>

User Activity Report Generation

The screenshot displays the CA DevTest Portal interface. The top navigation bar includes the CA Technologies logo, the text "DevTest Portal", and a "Current Project" dropdown set to "Bank v5". The left sidebar contains a menu with options: Home, Create, Manage, Monitor, Application Insight, Reporting (selected), CAI Top N and Metrics, Testing, Virtual Service Metrics, Administration, and Settings. The main content area is titled "Administration" and shows an "Audit" section. Within the "Audit" section, a red box highlights the "User Activity" report generation option. The description for this option is "View all user ACL activity in the audit log." To the right of the description are icons for PDF, CSV, XLS, Email, and Print. The footer of the page contains the text "Registry: mada03H53051.2010 | Version: 9.5.1" and "Copyright © 2016 CA. All rights reserved."

Example User Activity Report – All Actions

The screenshot displays the DevTest Portal interface. The main content area shows a 'User Activity' report with a table of user actions. The table is filtered for 'All Actions' and shows a list of activities performed by various users. The sidebar on the right contains a 'Refine By' section with filters for Time Range, Authorization, Roles, Users, Actions, Targeted Resource, and Details. The table is highlighted with a red rounded rectangle, and the sidebar is also highlighted with a red rounded rectangle.

Table Data:

Timestamp	User ID	Role	Action	Authorization	Targeted Resource	Details
12/06/2016 02:39:55 PM	admin	Super User	View Paths	Allowed		
12/06/2016 02:39:55 PM	admin	Super User	View Test	Allowed		
12/06/2016 02:39:55 PM	admin	Super User	View Cases	Allowed		
12/06/2016 02:39:54 PM	admin	Super User	Start LISA Workstation	Allowed		
12/06/2016 02:39:54 PM	admin	Super User	Logon	Allowed		
12/06/2016 02:34:21 PM	guest	Guest	Start LISA Workstation	Allowed		
12/06/2016 02:34:21 PM	guest	Guest	Start LISA Workstation	Allowed		
12/06/2016 02:34:20 PM	guest	Guest	Logon	Allowed		
12/06/2016 02:32:33 PM	admin	Super User	View Agents	Allowed		
12/06/2016 02:31:07 PM	admin	Super User	View Virtual Service Model	Allowed		
12/06/2016 02:31:07 PM	admin	Super User	View Virtual Service Image	Allowed		
12/06/2016 02:31:07 PM	admin	Super User	View Virtual Service Image	Allowed		
12/06/2016 02:31:07 PM	admin	Super User	View Virtual Service Model	Allowed		
12/06/2016 02:31:07 PM	admin	Super User	View Virtual Service Model	Allowed		
12/06/2016 02:31:07 PM	admin	Super User	View Virtual Service Model	Allowed		
12/06/2016 02:31:07 PM	admin	Super User	View Virtual Service Image	Allowed		
12/06/2016 02:31:07 PM	admin	Super User	View Virtual Service Image	Allowed		

Refine By Filters:

- Time Range:** Custom (From: 12/05/2016 2:40:00 PM, To: 12/06/2016 2:41:00 PM)
- Authorization:** ☒ Allowed, ☐ Denied
- Roles:** ☒ Super User, ☒ SV Power+, ☒ SV Power, SV Power+, ☒ Guest
- Users:** ☒ admin, ☒ guest
- Actions:** Enter Search Text, ☐ Logon, ☐ Start LISA Workstation, ☐ View Agents, ☐ View Cases, ☐ View Paths, ☐ View Test
- Targeted Resource:** [Empty field]
- Details:** [Empty field]

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Example User Activity Report – Denied Authorization

The screenshot displays the DevTest Portal interface. The left sidebar contains navigation links: Home, Create, Manage, Monitor, Application Insight, Reporting (selected), CAI Top N and Metrics, Testing, Virtual Service Metrics, Administration, and Settings. The main content area is titled 'User Activity' and shows a table of user activity logs. A red box highlights the 'User Activity' section and the table. The table has columns: Timestamp, User ID, Role, Action, Authorization, Targeted Resource, and Details. The data shows several 'Logon' attempts by 'dmazzel' which were 'Denied', and two 'View' actions by 'guest' which were also 'Denied'. The right sidebar contains filters for 'Refine By' (Time Range, From, To), 'Authorization' (Allowed, Denied), 'Roles' (Guest, None), 'Users' (guest), 'Actions' (View Test, View Virtual Service Model), 'Targeted Resource', and 'Details'. The 'Authorization' filter is set to 'Denied' and is also highlighted with a red box. The bottom of the page shows the registry information and version.

DevTest Portal

Current Project: Bank v5

Home Administration User Activity

User Activity
View all user ACL activity in the audit log.

Based On: Authorization: Denied
Filters: Targeted Resource: None Details: None

From: 12/05/2016 02:40:00 PM To: 12/06/2016 02:41:00 PM

Timestamp	User ID	Role	Action	Authorization	Targeted Resource	Details
12/06/2016 02:34:37 PM	dmazzel	None	Logon	Denied		
12/06/2016 02:34:35 PM	dmazzel	None	Logon	Denied		
12/06/2016 02:34:32 PM	dmazzel	None	Logon	Denied		
12/06/2016 02:34:31 PM	dmazzel	None	Logon	Denied		
12/06/2016 02:34:21 PM	guest	Guest	View Virtual Service Model	Denied		
12/06/2016 02:34:21 PM	guest	Guest	View Test	Denied		

12/06/2016 02:42:51 PM Page: 1 / 1

Refine By

Time Range: Custom
From: 12/05/2016 2:40:00 PM
To: 12/06/2016 2:41:00 PM

Authorization

☐ Allowed
☒ Denied

Roles

☐ Guest
☐ None

Users

☐ guest

Actions

☐ View Test
☐ View Virtual Service Model

Targeted Resource

Details

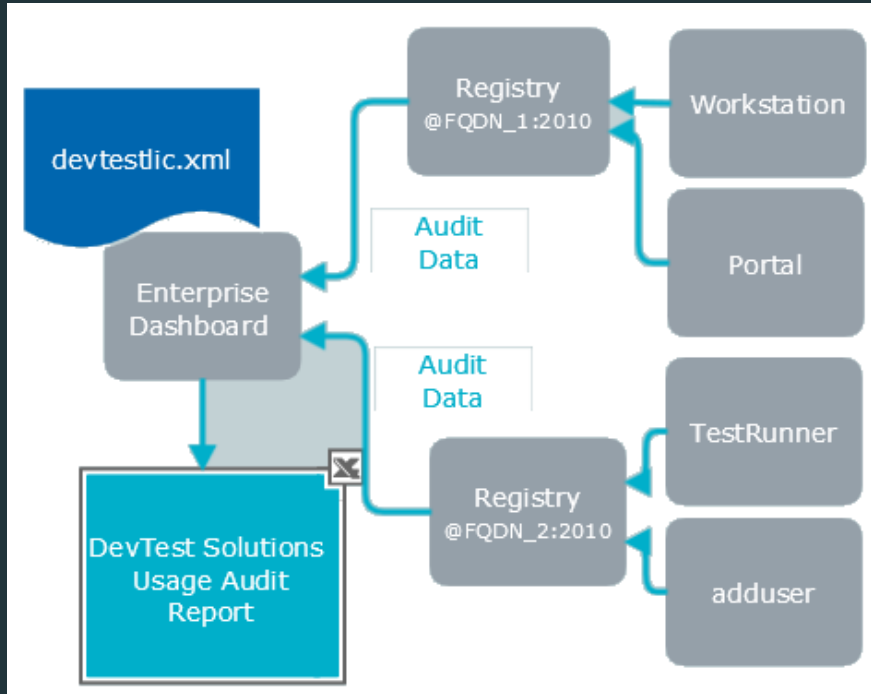
Apply

Registry: mazda03N53051-2010 | Version: 9.5.1

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Managing Licenses

Honor-Based License Administration



- The DevTest 8.0 and later license agreement is based on the *maximum allowed concurrent user sessions by user type*
- Concurrent usage data by user type is automatically collected
- A Usage Audit Report is a tool that helps users assess compliance with the license agreement

Concurrent Users

- Licensing is based on the number of *simultaneous (concurrent) users accessing the program*
- DevTest does not limit the number of users or prohibit more users from access if authenticated and authorized
- Each Concurrent User is entitled to have one active session that is connected to the server either directly or indirectly
- Each active session that is initiated by an individual, device, or process is counted as a Concurrent User

<https://docops.ca.com/devtest-solutions/9-5/en/administering/license-administration/usage-audit-report-faqs>

Export Usage Audit Report

The screenshot shows the CA Enterprise Dashboard interface. At the top, there's a navigation bar with 'Enterprise Dashboard' and links for Product Info, Support, Education, and Communities. Below this, the 'Home' section features a 'Peak Counts' widget with four categories: Continuous Application Insight Power User, Service Virtualization Power User, Application Test Power User, and DevTest Runtime User, all showing a count of 0. To the right of these counts is a date and time stamp: 12/6/2016 2:38:59 PM. A red box highlights a dropdown menu that is open, showing options: 'Export Registries To Excel', 'Last 6', 'Export Usage Audit Data' (which is highlighted), 'Purge Data', and 'Language'. Below the dropdown, there's a 'Registry' table with columns: Display Name, Name, Last Update, Version, Coordinators, Simulators, VSEs, Workstations, Agents, Labs, and DevTest Console URL. The table contains one row of data for 'Registry@mazda03N53051.ca.com-2010'. At the bottom of the dashboard, there's a footer with 'Version: 9.5.1' and 'Copyright © 2016 CA. All rights reserved'.

Enterprise Dashboard

Product Info Support Education Communities

Home

Peak Counts

12/6/2016 2:38:59 PM

Export Registries To Excel
Last 6
Export Usage Audit Data
Purge Data
Language

Registry

Display Name	Name	Last Update	Version	Coordinators	Simulators	VSEs	Workstations	Agents	Labs	DevTest Console URL
Registry@mazda03N53051.ca.com-2010	tcp://mazda03N53051:2010/Registry	12/6/2016 2:35:49 PM	9.5.1 (9.5.1.6)	1	1	1	0	1	1	http://mazda03N53051:1505/index.html

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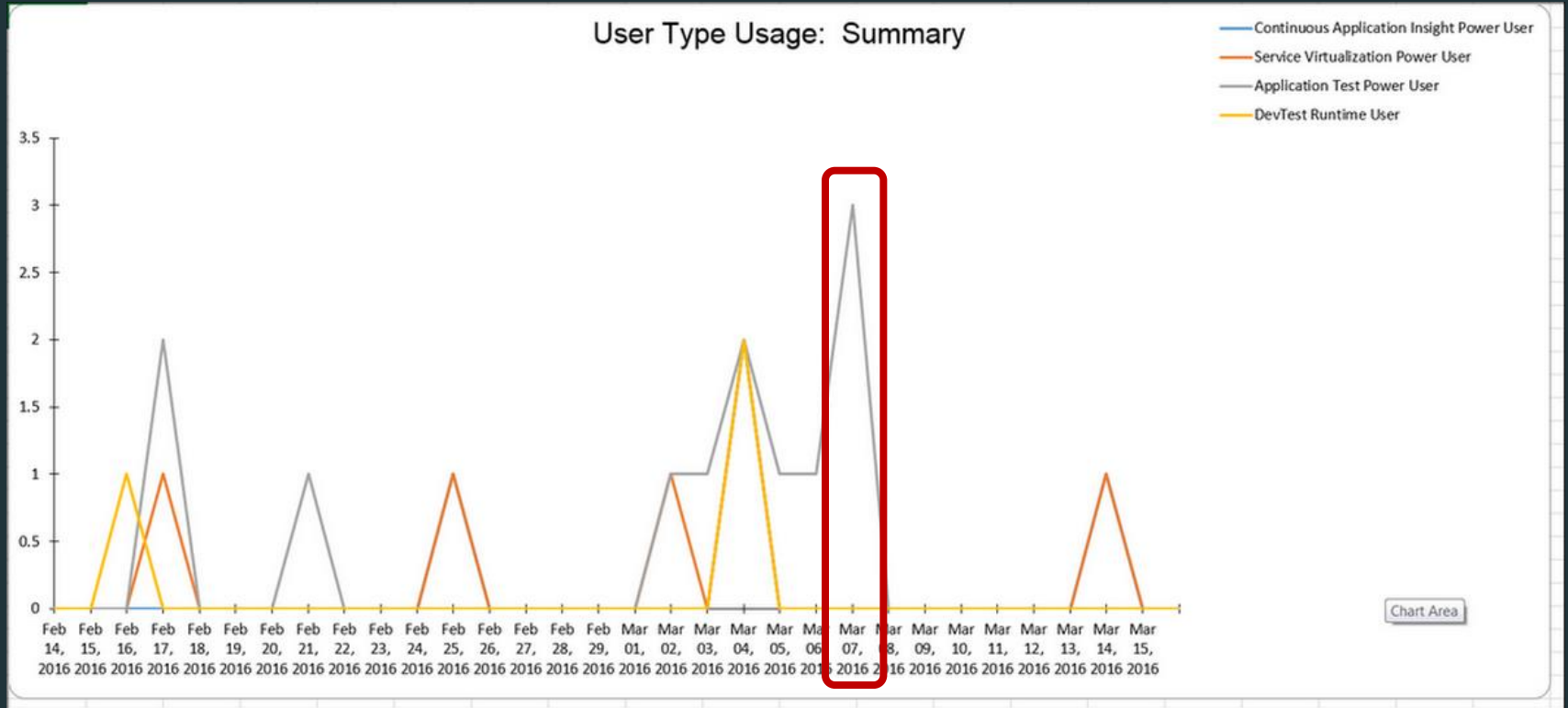
<https://docops.ca.com/devtest-solutions/9-5/en/administering/monitoring/use-the-enterprise-dashboard/export-dashboard-data>

Understanding the Usage Audit Report

	A	B	C
1	DevTest Solutions	Usage Audit Report	
2	Company:	AppDelBU	
3	License Key ID:	1fbe856	
4	License Key Expiration:	December 08, 2016	
5	Enterprise Dashboard Product Version	9.5.0	
6	Reporting Period Start:	February 14, 2016	
7	Reporting Period End:	March 15, 2016	
8	Generated On:	March 22, 2016	
9	User Type	Maximum Concurrent Use Counts	Instances of Max Use Count
10	Continuous Application Insight Power User	2	1
11	Service Virtualization Power User	2	2
12	Application Test Power User	3	1
13	DevTest Runtime User	2	1
14	Maximum Concurrent Instances	Maximum Concurrent Use Counts	Instances of Max Use Count
15	Service Virtualization for Performance	2	1
16			
17	Usage Audit Documentation		
18			
19			

<https://docops.ca.com/devtest-solutions/9-5/en/administering/license-administration/devtest-solutions-usage-audit-report>

User Type by Day



<https://docops.ca.com/devtest-solutions/9-5/en/administering/license-administration/devtest-solutions-usage-audit-report>

Historical Usage by Day

Date	SV for Performance	Application Insight Power User	Service Virtualization Power User	Application Test Power User	DevTest Runtime User
Feb 14, 2016	0	0	0	0	0
Feb 15, 2016	0	0	0	0	0
Feb 16, 2016	0	0	0	0	1
Feb 17, 2016	0	0	1	2	0
Feb 18, 2016	2	0	0	0	0
Feb 19, 2016	0	0	0	0	0
Feb 20, 2016	0	0	0	0	0
Feb 21, 2016	0	0	0	1	0
Feb 22, 2016	0	0	0	0	0
Feb 23, 2016	0	0	0	0	0
Feb 24, 2016	0	0	0	0	0
Feb 25, 2016	0	1	1	0	0
Feb 26, 2016	0	0	0	0	0
Feb 27, 2016	0	0	0	0	0
Feb 28, 2016	0	0	0	0	0
Feb 29, 2016	0	0	0	0	0
Mar 01, 2016	0	0	0	0	0
Mar 02, 2016	0	0	1	1	0
Mar 03, 2016	0	0	0	1	0
Mar 04, 2016	1	2	2	2	2
Mar 05, 2016	1	0	0	1	0
Mar 06, 2016	1	0	0	1	0
Mar 07, 2016	1	0	0	3	0
Mar 08, 2016	0	0	0	0	0
Mar 09, 2016	0	0	0	0	0
Mar 10, 2016	0	0	0	0	0
Mar 11, 2016	0	0	0	0	0
Mar 12, 2016	0	0	0	0	0
Mar 13, 2016	0	0	0	0	0

<https://docops.ca.com/devtest-solutions/9-5/en/administering/license-administration/devtest-solutions-usage-audit-report>

Component by User

Registry	User Name	User Type	Total Sessions	Console	invoke2-api	Test Runner	Workstation
Registry@lenba0113068-2.ca.com:2010	admin	PF_POWER_USER	1	0	0	0	1
Registry@lenba0113068-2.ca.com:2010	admin	SV_POWER_USER	1	0	0	0	1
Registry@lenba0113068-2.ca.com:2010	tpower	TEST_POWER_USER	2	0	0	0	2
Registry@lenba0113933-2.ca.com:2010	admin	PF_POWER_USER	1	0	0	0	1
Registry@lenba0113933-2.ca.com:2010	admin	SV_POWER_USER	1	0	0	0	1
Registry@LENBA01.ca.com:2010	tpower	TEST_POWER_USER	1	0	0	0	1
Registry@lenba0113638-2.ca.com:2010	admin	ADMIN_USER	3	3	0	0	0
Registry@lenba0113638-2.ca.com:2010	barb	ADMIN_USER	4	4	0	0	0
Registry@lenba0113638-2.ca.com:2010	barb	PF_POWER_USER	6	0	2	0	4
Registry@lenba0113638-2.ca.com:2010	barb	SV_POWER_USER	6	0	2	0	4
Registry@lenba0113638-2.ca.com:2010	guest	SVT_RUNTIME_USER	3	0	1	0	2
Registry@lenba0113638-2.ca.com:2010	svpower	ADMIN_USER	5	5	0	0	0
Registry@lenba0113638-2.ca.com:2010	svpower	SV_POWER_USER	6	5	0	0	1
Registry@lenba0113638-2.ca.com:2010	tpower	ADMIN_USER	3	3	0	0	0
Registry@lenba0113638-2.ca.com:2010	tpower	TEST_POWER_USER	14	3	3	2	6

<https://docops.ca.com/devtest-solutions/9-5/en/administering/license-administration/devtest-solutions-usage-audit-report>

Optimizing ACL and Licenses

- Configure LDAP/AD authentication/authorization using authentication-providers.xml
- Create groups for SV users by functional role using ldap-mappings.xml
- Specify a timeout value for Portal and Workstation UI sessions so that users who are not active will time out and not be counted in the Usage Audit Report (registry.max.user.lifetime.seconds)
- Assign an “SV admin” for each logical group of engineers as a Super User and the rest as Power Users or Runtime Users



Daniel Mazzei

Engineering Services Architect

Daniel.Mazzei@ca.com



in