

End user experience monitoring of cloud applications

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Würth Phoenix

quality of service

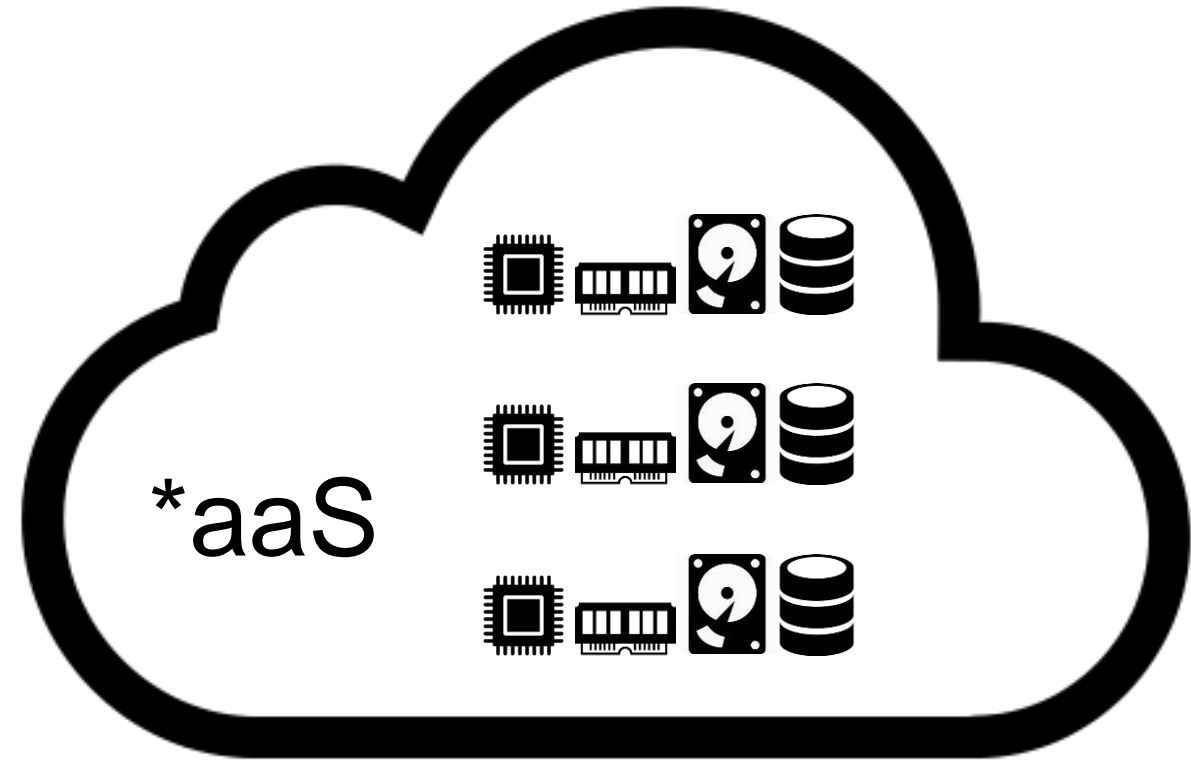


End User

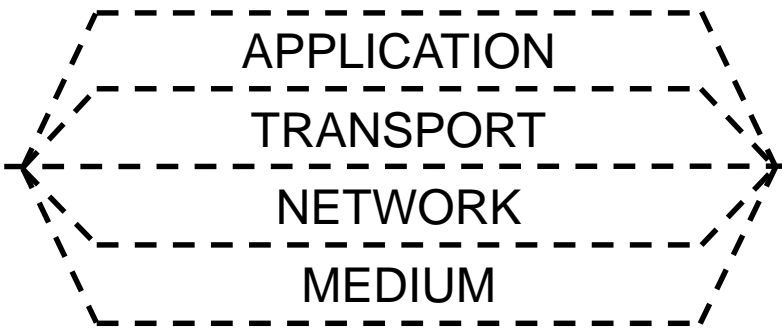
performance

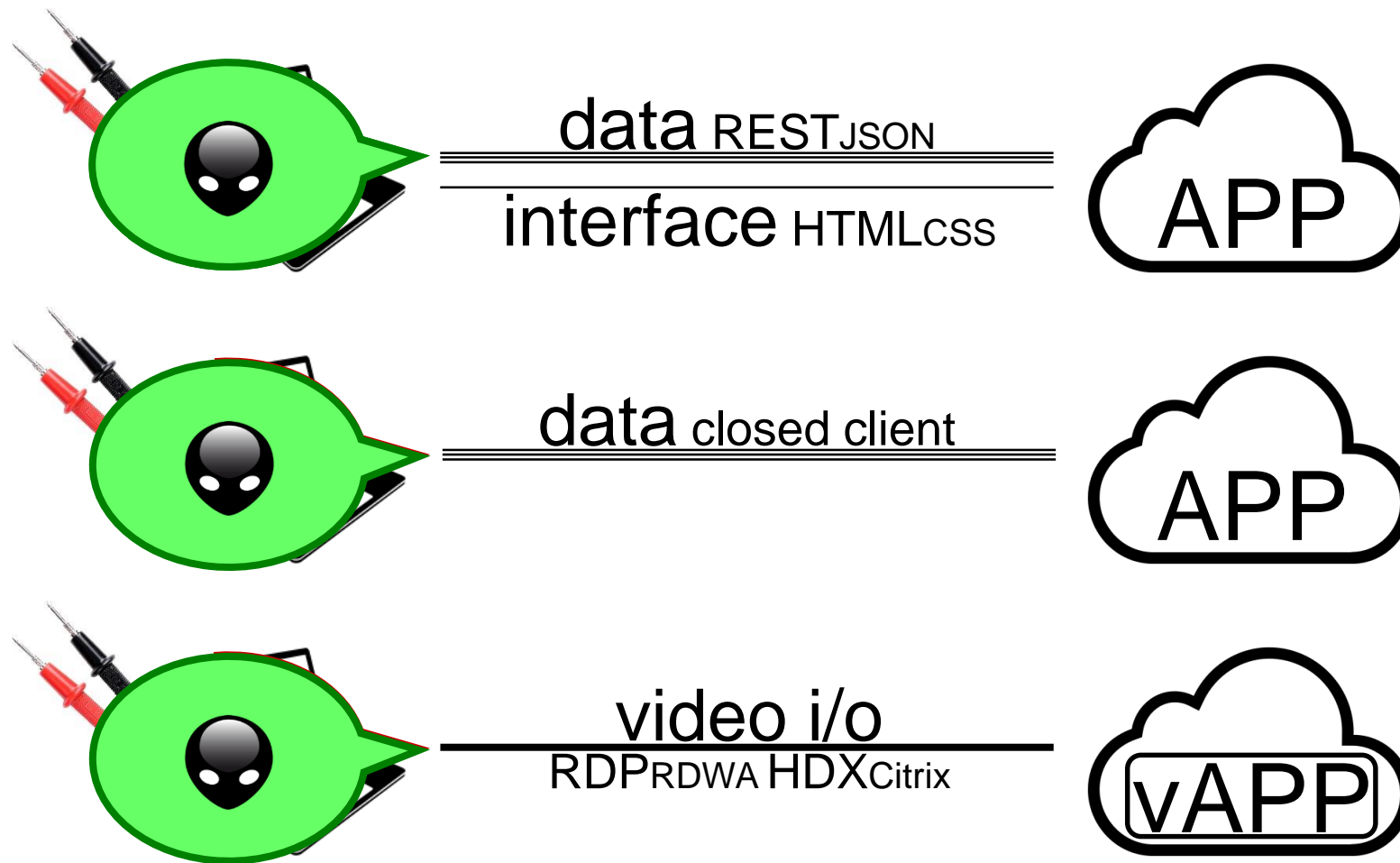


*aaS



final SLA







What is alyvix?

Visual Synthetic Monitoring

Visual

Alyvix looks at **graphic interfaces**

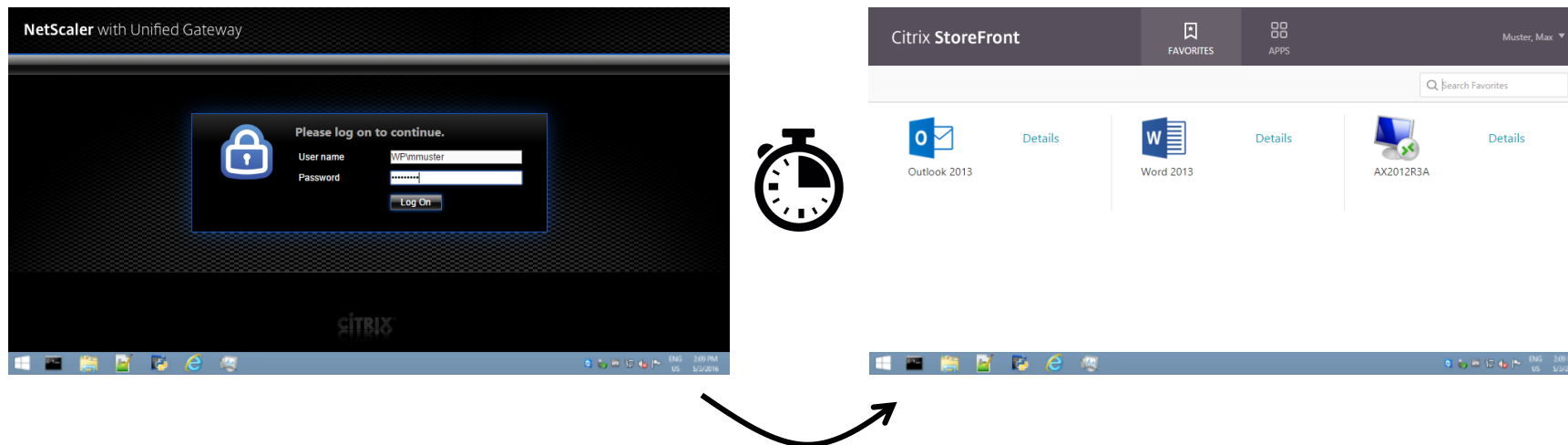
Synthetic

Alyvix behaves like **human users**

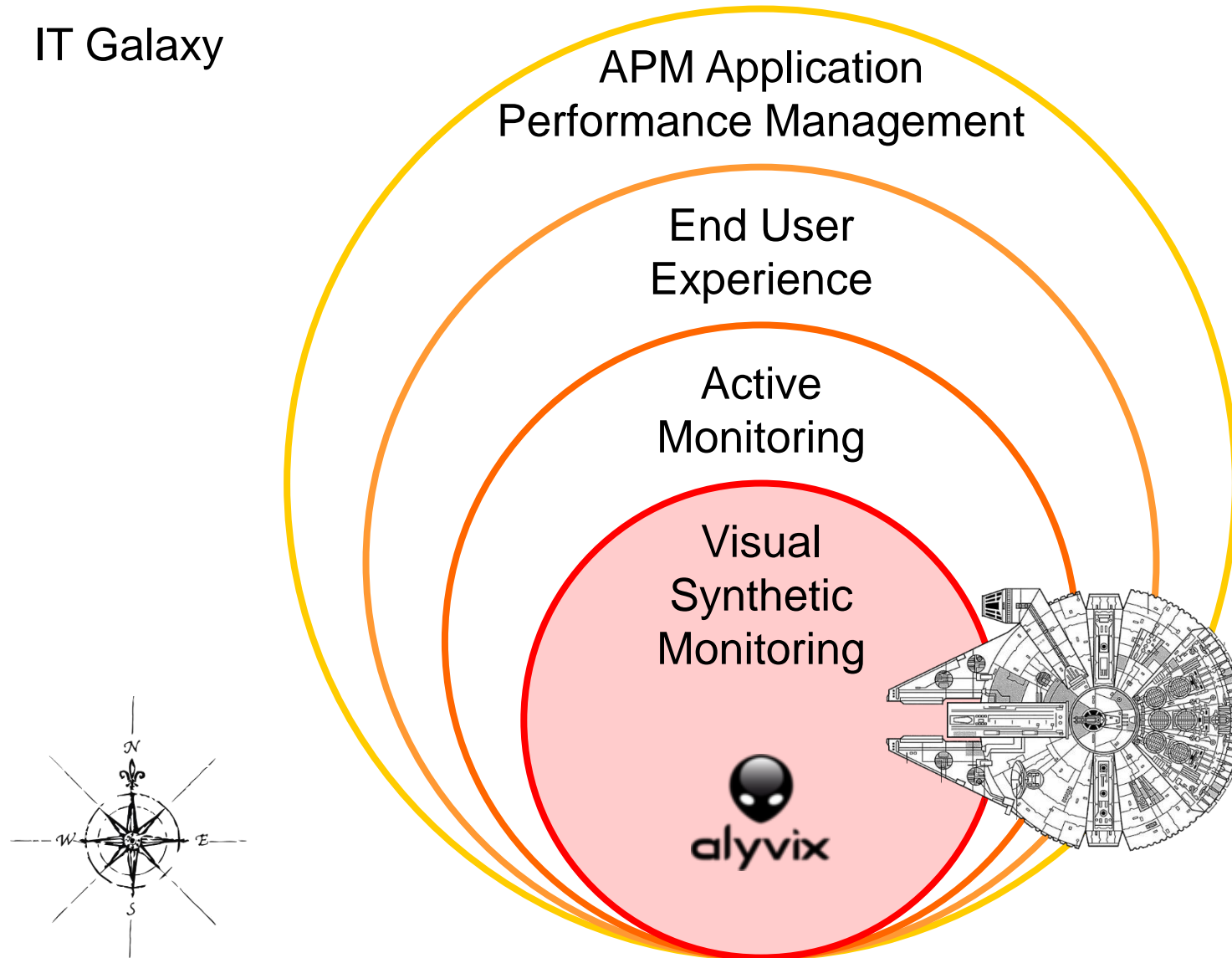
Monitoring

Alyvix tracks **transaction performances**

An **application transaction** implies a **time gap** between an app interaction and its visualization



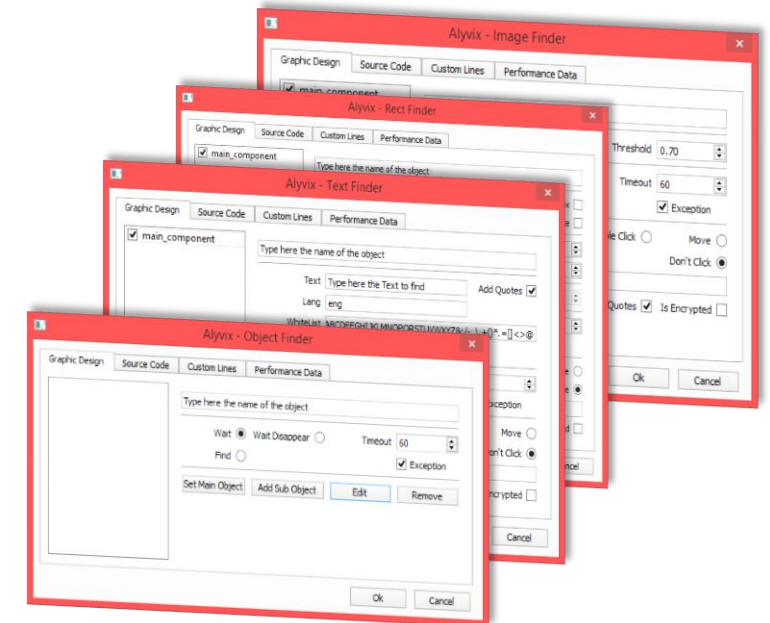
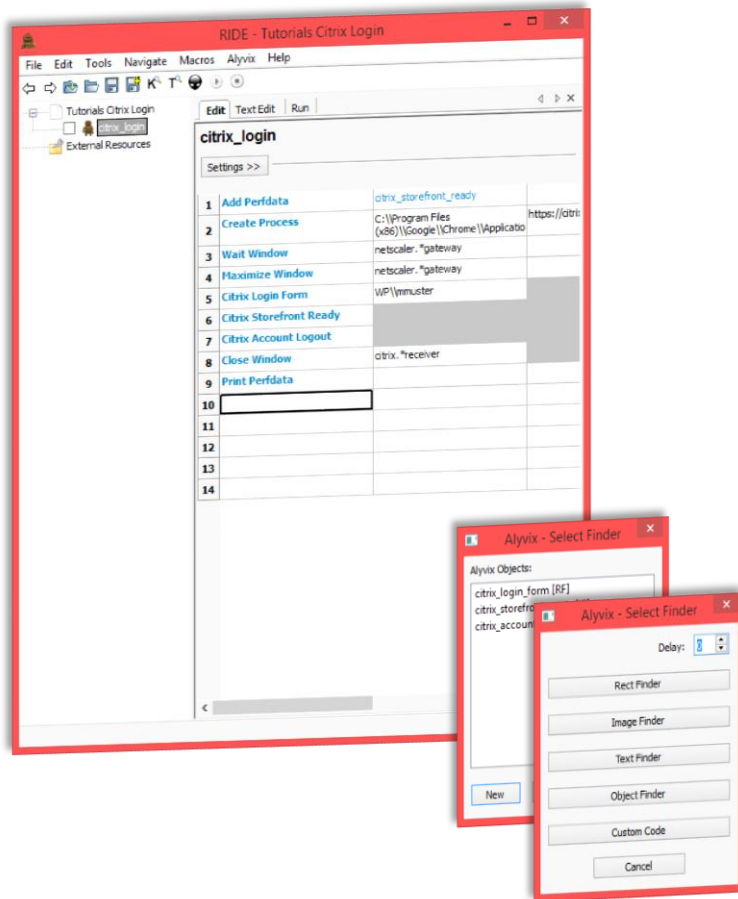
IT Galaxy



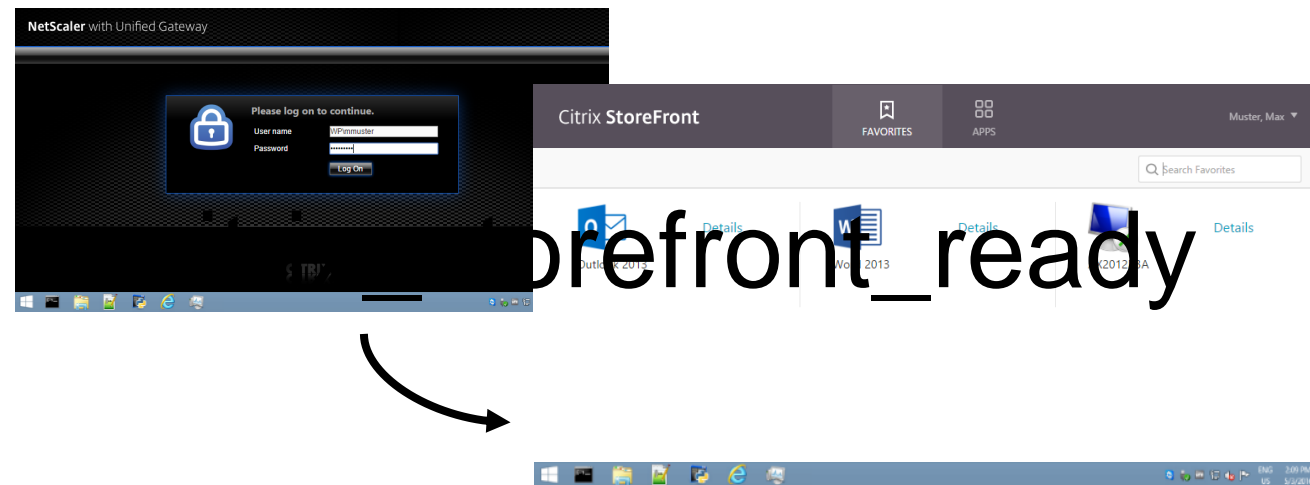
Alyvix automates any application

interacting with GUIs exactly as a human would do

Alyvix provides GUI tools to **design** any app transactions



1 Application keyword



1. Define a unique application **graphics** in a keyword
2. Plan **interactions** on an application state in a keyword
3. Measure the **time** that a keyword takes to appear

Alyvix Image Finder keyword detects and interacts with image components



WÜRTHPHOENIX
NetEye Citrix StoreFront

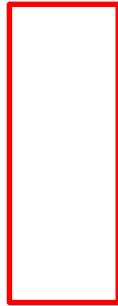
Start Tour

TRENTINO

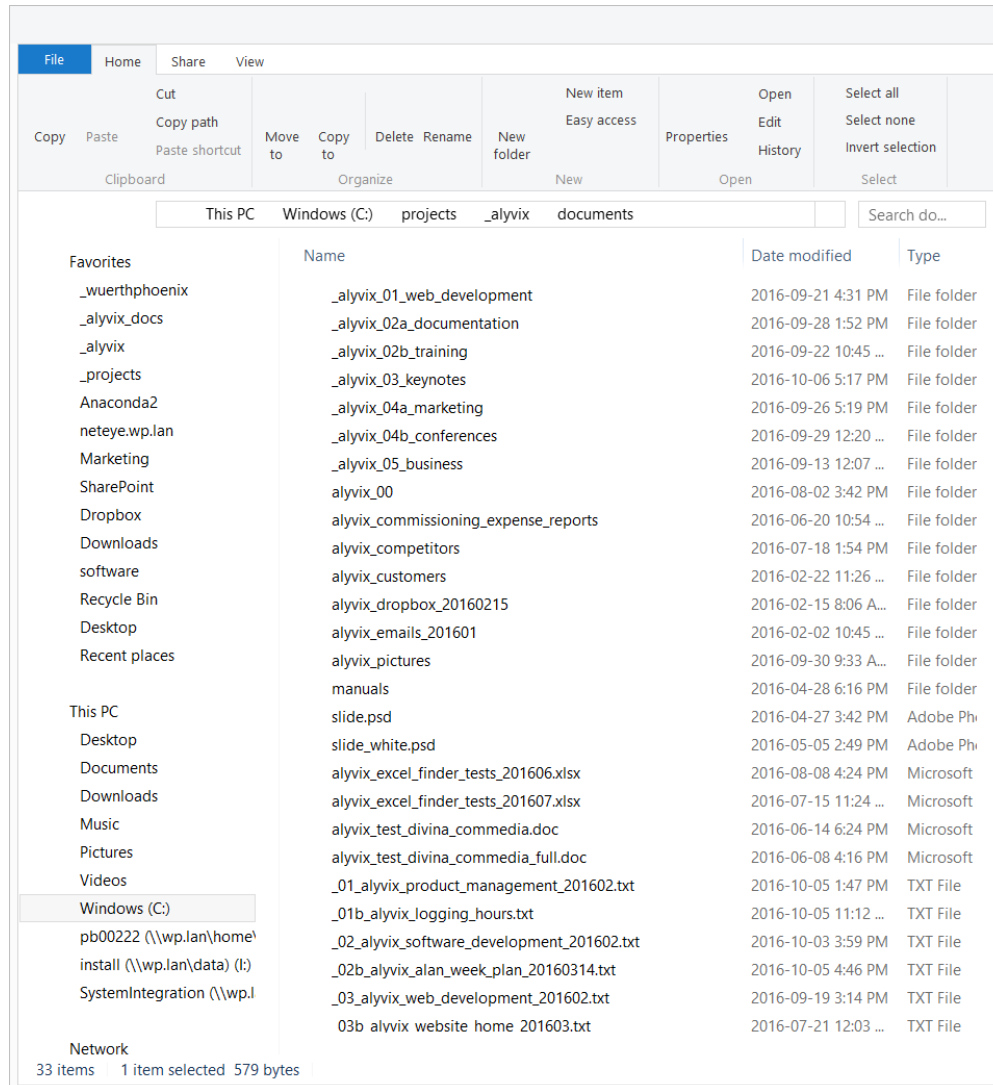


Alyvix Rect Finder keyword

detects and interacts with
rectangle components



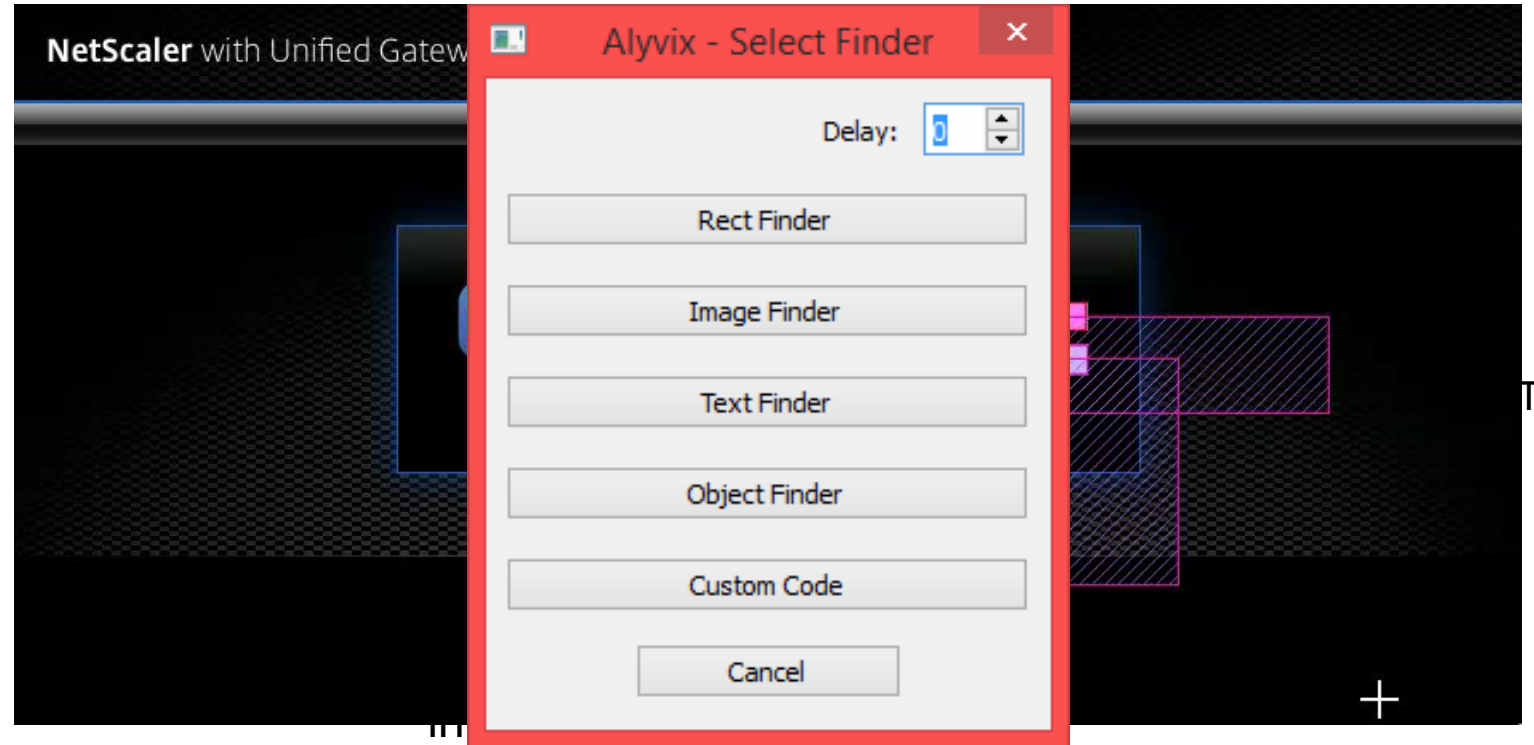
Alyvix Text Finder keyword detects and interacts with text string components



LA DIVINA COMMEDIA di Dante Alighieri INFERNO CANTO I [Incomincia la Comedia di Dante Alleghieri di Fiorenza, ne la quale tratta de le pene e punimenti de' vizi e de' meriti e premi de le virtù. Comincia il canto primo de la prima parte la quale si chiama Inferno, nel qual l'auttore fa proemio a tutta l'opera.] Nel mezzo del cammin di nostra vita mi ritrovai per una selva oscura, ché la diritta via era smarrita. Ahi quanto a dir qual era è cosa dura esta selva selvaggia e aspra e forte che nel pensier rinova la paura! Tant' è amara che poco è più morte; ma per trattar del ben ch'i' vi trovai, dirò de l'altre cose ch'i' v'ho scorte. Io non so ben ridir com' i' v'intrai, tant' era pien di sonno a quel punto che la verace via abbandonai. Ma poi ch'i' fui al piè d'un colle giunto, là dove terminava quella valle che m'avea di paura il cor compunto, guardai in alto e vidi le sue spalle vestite già de' raggi del pianeta che mena dritto altrui per ogni calle. Allor fu la paura un poco queta, che nel lago del cor m'era durata la notte ch'i' passai con tanta pietà. E come quei che con lena affannata, uscito fuor del pelago a la riva, si volge a l'acqua perigliosa e guata, così l'animo mio, ch'ancor fuggiva, si volse a retro a rimir lo passo che non lasciò già mai persona viva. Poi ch'èi posato un poco il corpo lasso, ripresi via per la piaggia diserta, sì che 'l piè fermo sempre era 'l più basso. Ed ecco, quasi al cominciar de l'erta, una lonza leggiera e presta molto, che di pel macolato era coverta; e non mi si partia dinanzi al volto, anzi 'mpediva tanto il mio cammino, ch'i' fui per ritornar più volte vòlto. Temp' era dal principio del mattino, e 'l sol montava 'n sù con quelle stelle ch'eran con lui quando l'amor divino mosse di prima quelle cose belle; sì ch'a bene sperar m'era cagione di quella fiera a la gaetta pelle l'ora del tempo e la dolce stagione; ma non sì che paura non mi desse la vista che m'apparve d'un leone. Questi pareo che contra me venisse con la test' alta e con rabbiosa fame, sì che pareo che l'aere ne tremesse. Ed una lupa, che di tutte brame semiava carca ne la sua magrezza, e molte genti fé già viver grame, questa mi porse tanto di gravezza con la paura ch'uscìa di sua vista, ch'io perdei la speranza de l'altezza. E qual è quei che volontieri acquista, e giugne 'l tempo che perder lo face, che 'n tutti suoi pensier piange e s'attrista; tal mi fece la bestia senza pace, che, venendomi 'ncontro, a poco a poco mi ripigneva là dove 'l sol tace. Mentre ch'i' rovinava in basso loco, dinanzi a li occhi mi si fu offerto chi per lungo silenzio parea fioco. Quando vidi costui nel gran deserto, «Miserere di me», gridai a lui, «qual che tu sii, od ombra od omo certo!». Rispuosemi: «Non omo, omo già fui, e li parenti miei furon lombardi, mantoani per patrìa ambedui. Nacqui sub Iulio, ancor che fosse tardi, e vissi a Roma sotto 'l buono Augusto nel tempo de li dèi falsi e bugiardi. Poeta fui, e cantai di quel giusto figliuol d'Anchise che venne di Troia, poi che 'l superbo Ilión fu combusto. Ma tu perché ritorni a tanta noia? perché non sali il dilettoso monte ch'è principio e cagion di tutta gioia?». «Or se' tu quel Virgilio e quella fonte che spandi di parlar sì largo fiume?», rispuos' io lui con vergognosa fronte. «O de li altri poeti onore e lume, vagliami 'l lungo studio e 'l grande amore che m'ha fatto cercar lo tuo volume. Tu se' lo mio maestro e 'l mio autore, tu se' solo colui da cu' io tolsi lo bello stilo che m'ha fatto onore. Vedi la bestia per cu' io mi volsi; aiutami da lei, famoso saggio, ch'ella mi fa tremar le vene e i polsi». «A te convien tenere altro viaggio», rispuose, poi che lagrimar mi vide, «se vuoi' campar d'esto loco selvaggio; ché questa bestia, per la qual tu gridi, non lascia altrui passar per la sua via, ma tanto lo 'mpedisce che l'uccide; e ha natura sì malvagia e ria, che mai non empie la bramosa voglia, e dopo 'l pasto ha più fame che pria. Molti son li animali a cui s'ammoglia, e più saranno ancora, infin che 'l veltro verrà, che la farà morir con doglia. Questi non ciberà terra né peltro, ma sapienza, amore e virtute, e sua nazione sarà tra feltro e feltro. Di quella umile Italia fia salute per cui morì la vergine Cammilla, Eurialo e Turno e Niso di ferute. Questi la cacerà per ogni villa, fin che l'avrà rimessa ne lo 'nferno, là onde 'nvidia prima dipartilla. Ond' io per lo tuo me' penso e discerno che tu mi segui, e io sarò tua guida, e trarrotti di qui per loco eterno; ove udirai le disperate strida, vedrai li antichi spiriti dolenti, ch'a la seconda morte ciascun grida; e vederai color che son contenti nel foco, perché speran di venire quando che sia a le beate genti. A la qual poi se tu vorrai salire, anima fia a ciò più di me degna: con lei ti lascerò nel mio partire; ché quello imperador che là sù regna, perch' i' fu' ribellante a la sua legge, non vuol che 'n sua città per me si vegna. In tutte parti impera e quivì regge; quivì è la sua città e l'alto seggio: oh felice colui cu' ivi elegge!». E io a lui: «Poeta, io ti richeggio per quello Dio che tu non conoscesti, a ciò ch'io fugga questo male e peggio, che tu mi meni là dov' or dicesti, sì ch'io veggia la porta di san Pietro e color cui tu fai cotanto mesti». Allor si mosse, e io li tenni dietro.

Transaction definition in an **Alyvix** keyword

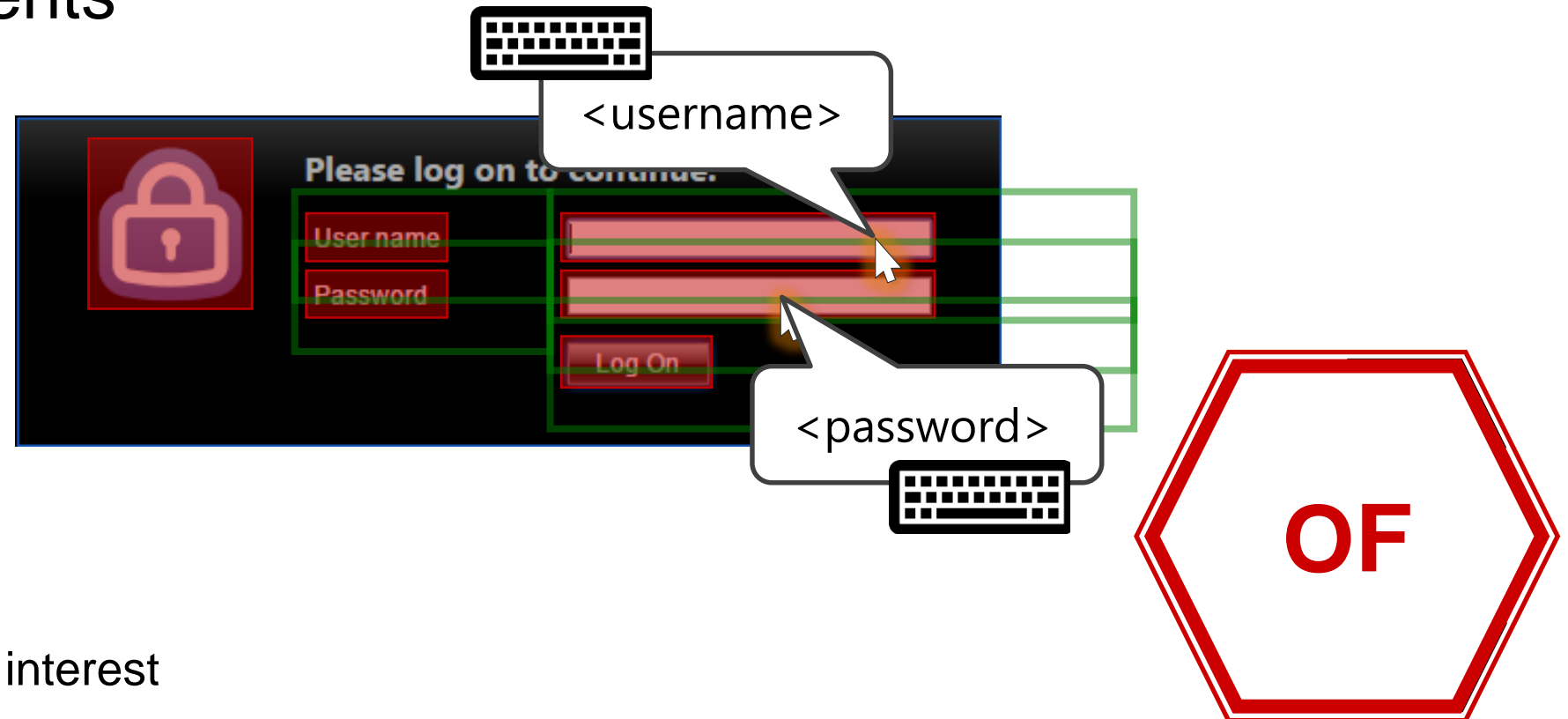
1. Select an Alyvix Finder type
2. Select graphic components
3. Type keyword name
4. Set recognition settings
5. Set interaction modes
6. Set performance settings



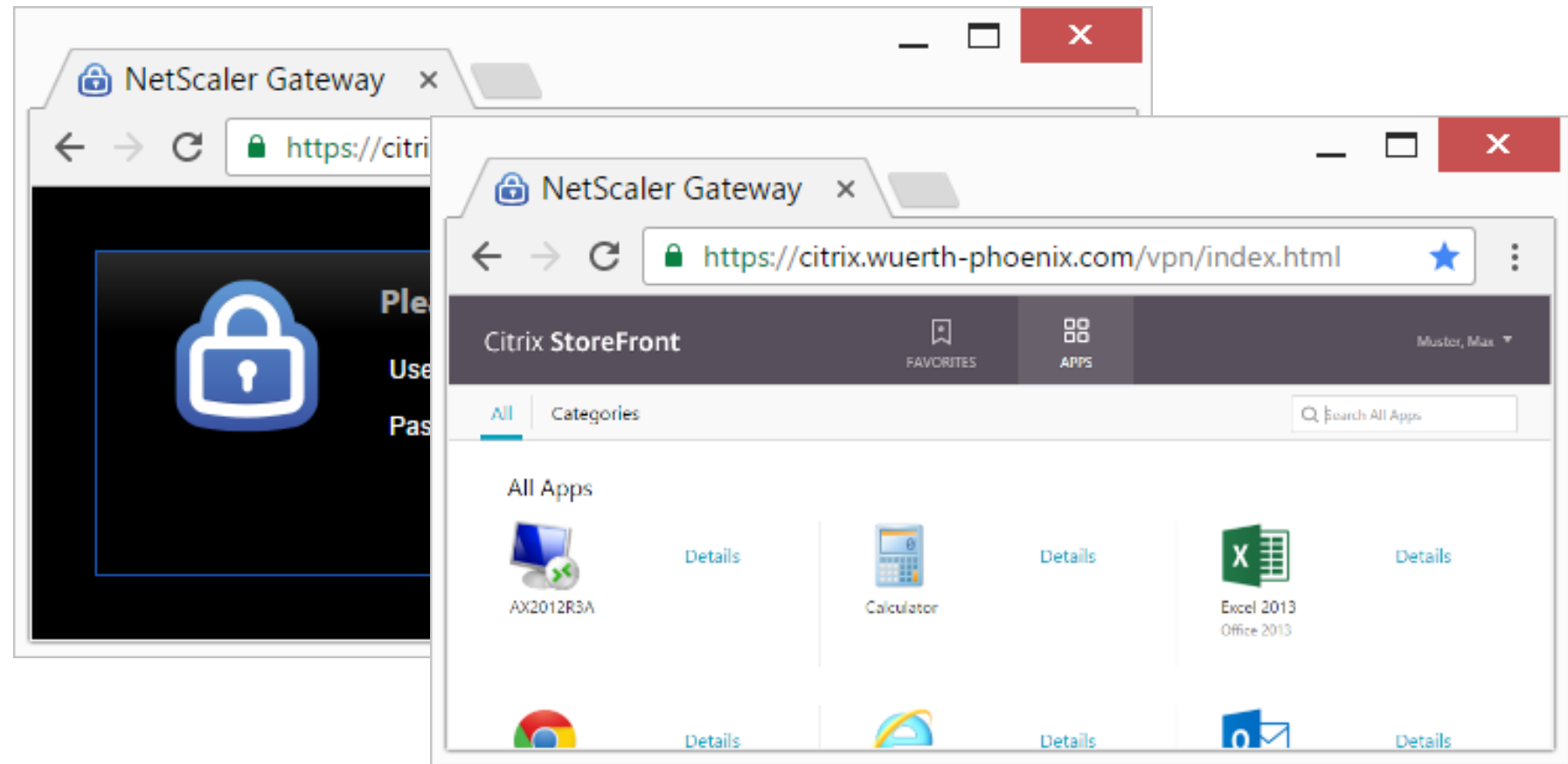
- IF similarity threshold
- RF size thresholds
- TF regular expression

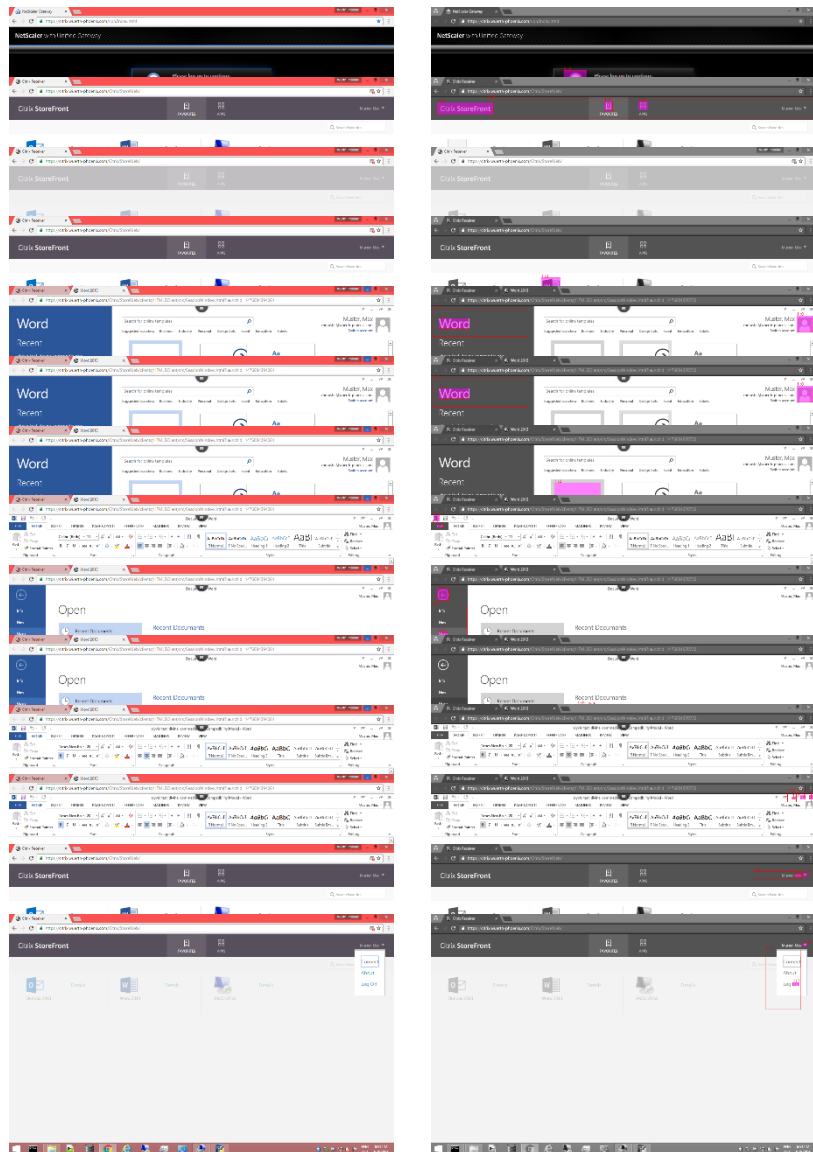
Alyvix **Object Finder** keyword

detects and interacts with multitype components



- ◆ IF similarity threshold
- ◆ RF size thresholds
- ◆ TF regular expression
- ◆ IF↔RF↔TF regions of interest





RIDE - Wp Citrix Word

File Edit Tools Navigate Macros Alyvix Help

Wp Citrix Word
wp_citrix_word
setup
exit
External Resources

End user-interaction flow

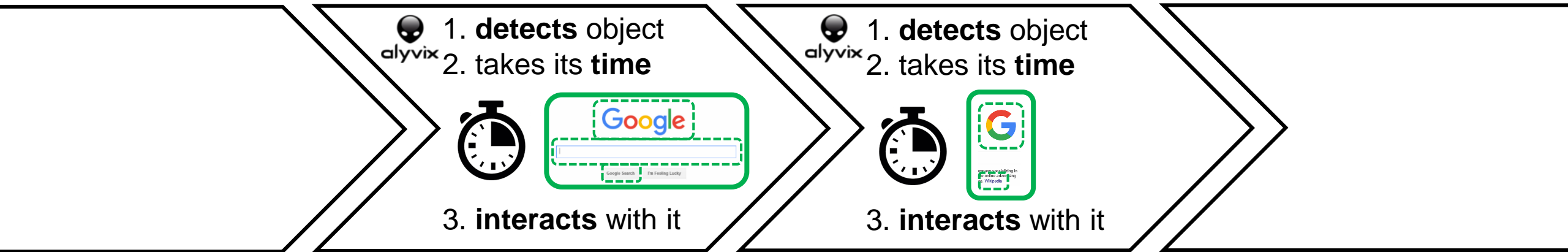
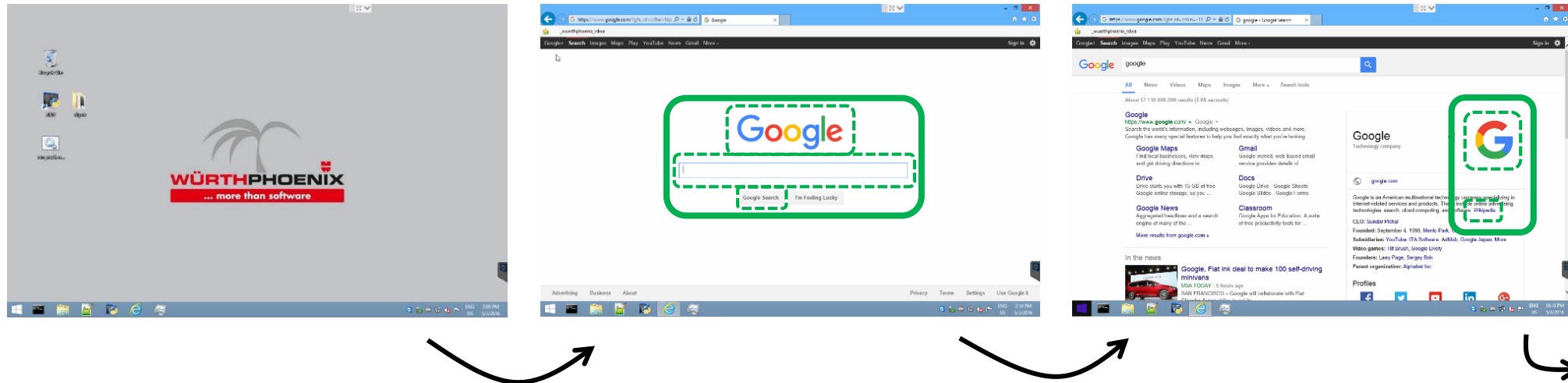
List of transactions

Test case

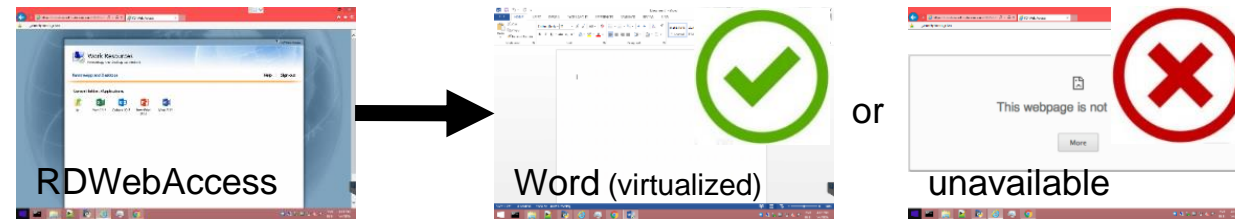
1	Citrix Login	WP\mmuster
2	Citrix Ready	
3	Citrix Reconnect	
4	Citrix Run Word	
5	Word Ready	
6	Word File Started	
7	Word Blank Doc	
8	Word File	file
9	Word Open	open
10	Word Open Doc File	alyvix_test_divina_commedia.doc
11	Word Open Ready	100
12	Word Exit	
13	Citrix Account	.*muster.*max.*
14	Citrix Logoff	

Alyvix **measures** app transactions

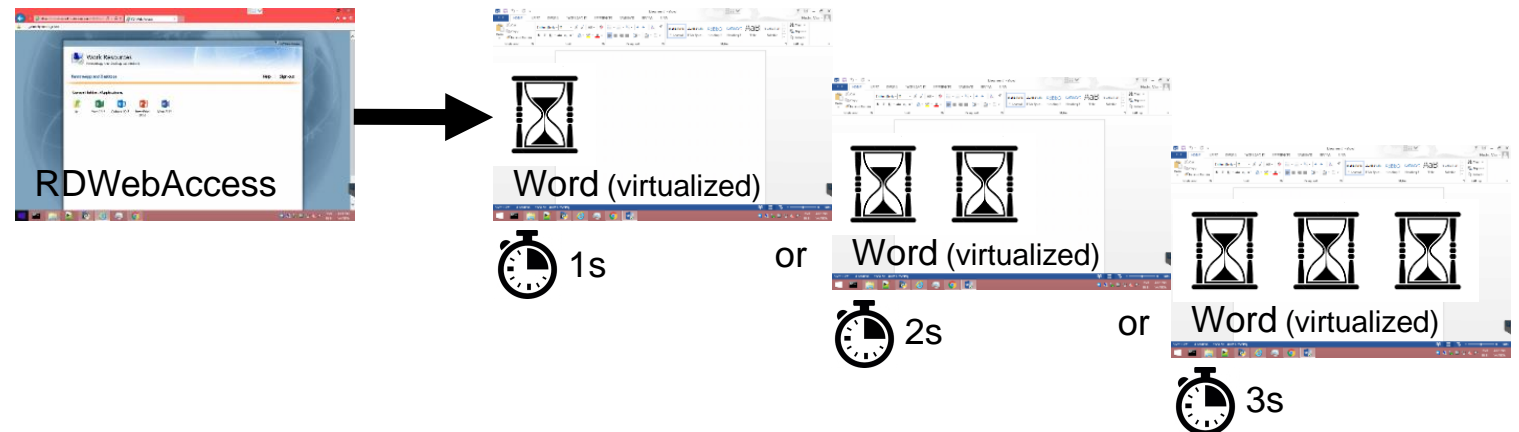
defined and then listed in test cases



1. Check AVAILABILITY

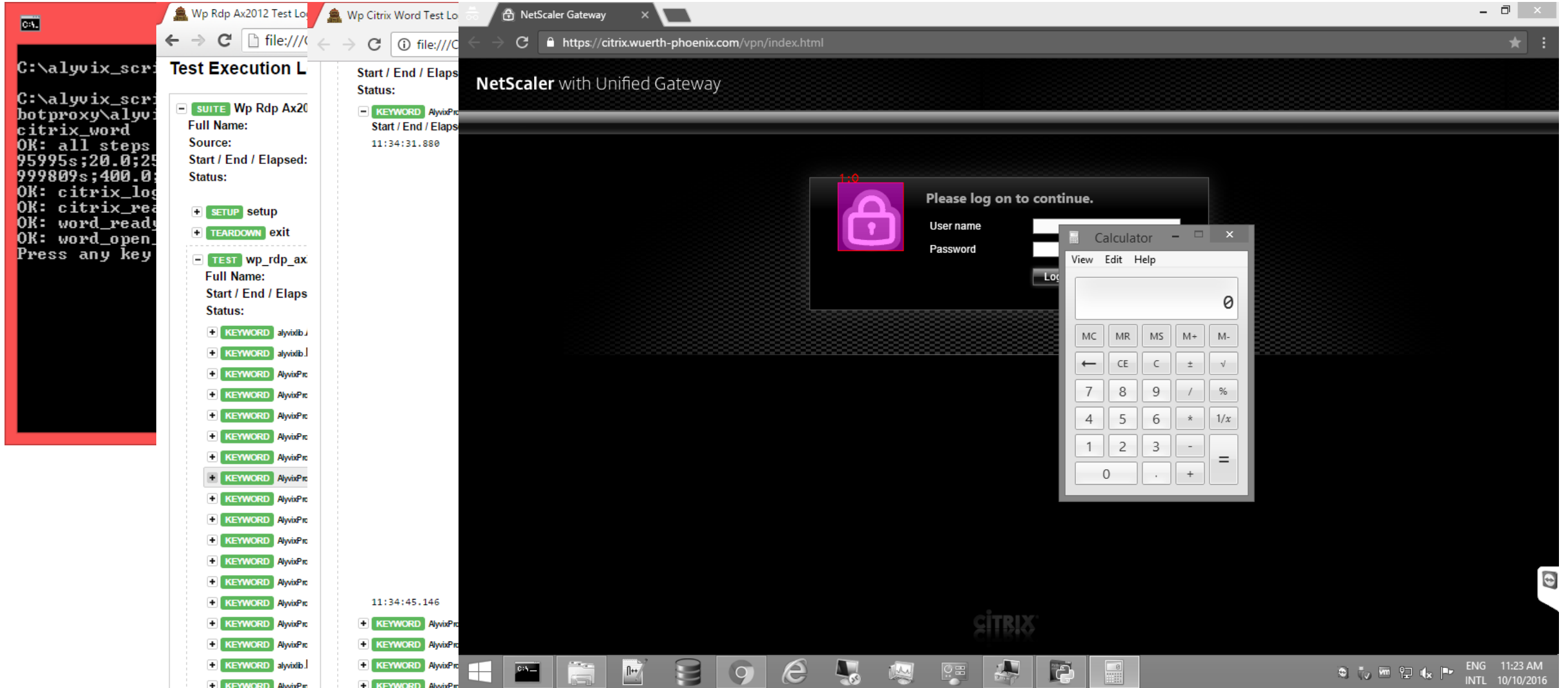


2. Measure RESPONIVENESS



Alyvix reports test case transactions

in HTML pages



The screenshot displays a multi-paneled test execution environment. On the left, a terminal window shows the execution of a script with the following output:

```
C:\alyvix_scr...
C:\alyvix_scr...
botproxy\alyv...
citrix_word
OK: all steps
95995s;20.0;25...
999809s;400.0;...
OK: citrix_log...
OK: citrix_rea...
OK: word_read...
OK: word_open...
Press any key
```

The middle pane, titled "Test Execution L", shows a test suite named "Wp Rdp Ax20" with the following details:

- SUITE: Wp Rdp Ax20
- Full Name:
- Source:
- Start / End / Elapsed:
- Status:
- SETUP: setup
- TEARDOWN: exit
- TEST: wp_rdp_ax
- Full Name:
- Start / End / Elapsed:
- Status:

Below these details is a list of 18 test cases, each with a "KEYWORD" and a status of "AlyvixPrc".

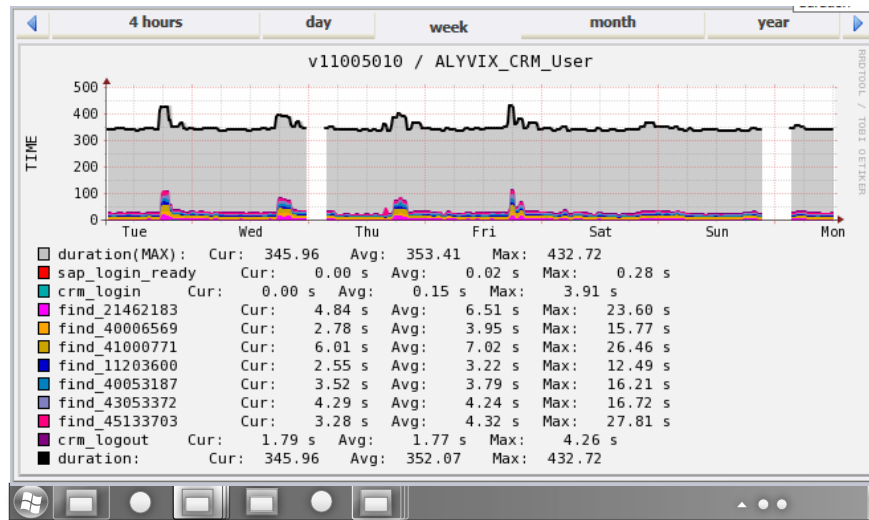
The right pane shows a "NetScaler Gateway" browser window at the URL <https://citrix.wuerth-phoenix.com/vpn/index.html>. The page title is "NetScaler with Unified Gateway". A login prompt is visible, asking the user to log on to continue. The login form includes fields for "User name" and "Password", and a "Log" button. A "Calculator" application is open in the foreground, showing the number "0" in the display.

The Windows taskbar at the bottom shows the system tray with the date and time: "ENG 11:23 AM INTL 10/10/2016".

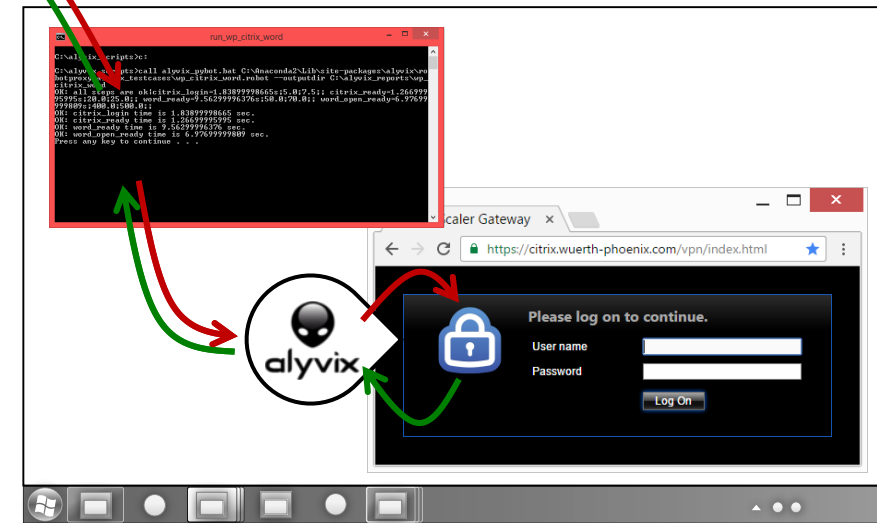
Alyvix **visualizes** test case performances

tracking them thanks to **NetEye**

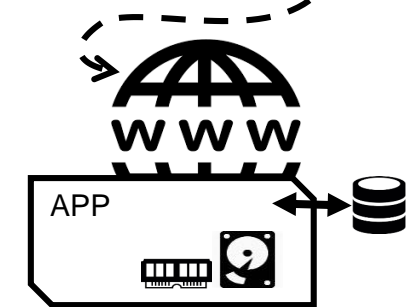
NetEye server

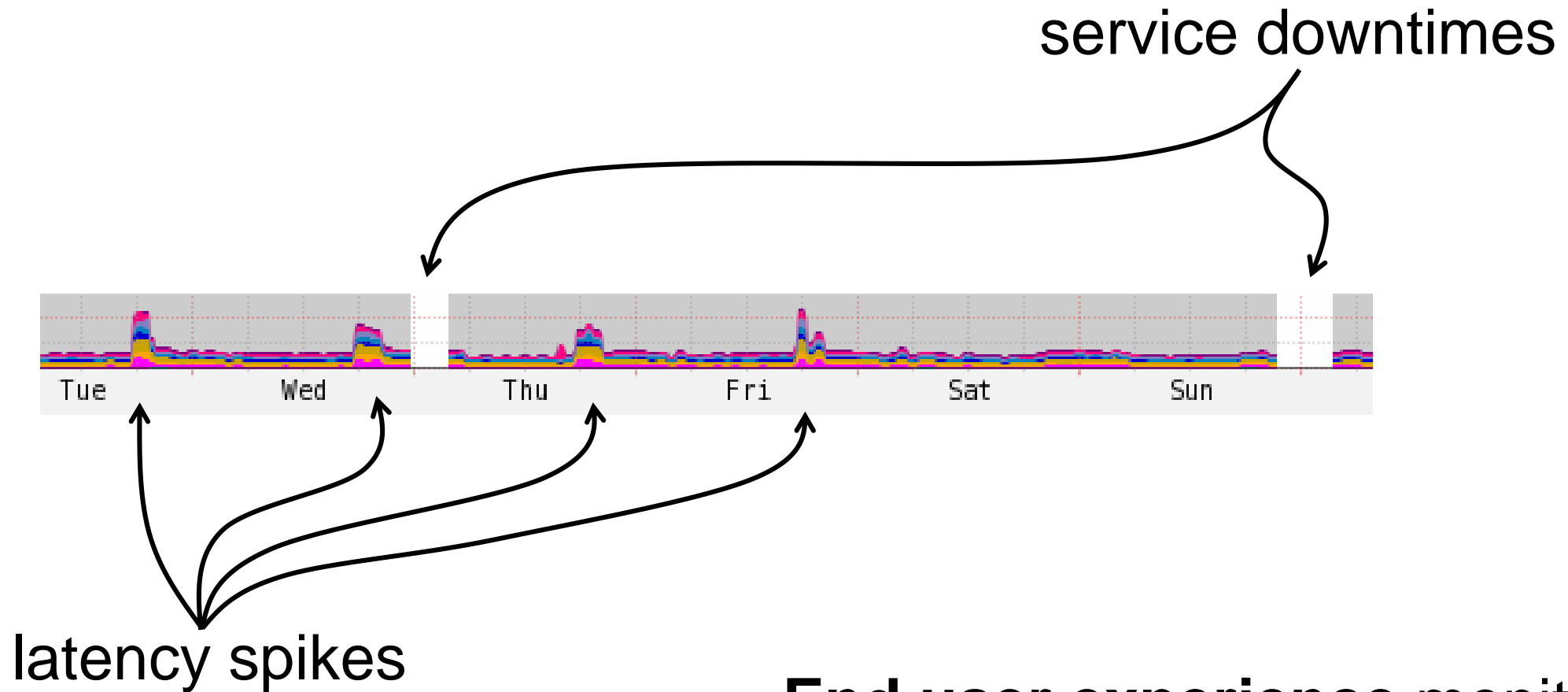


Alyvix probe WinOS 64bit

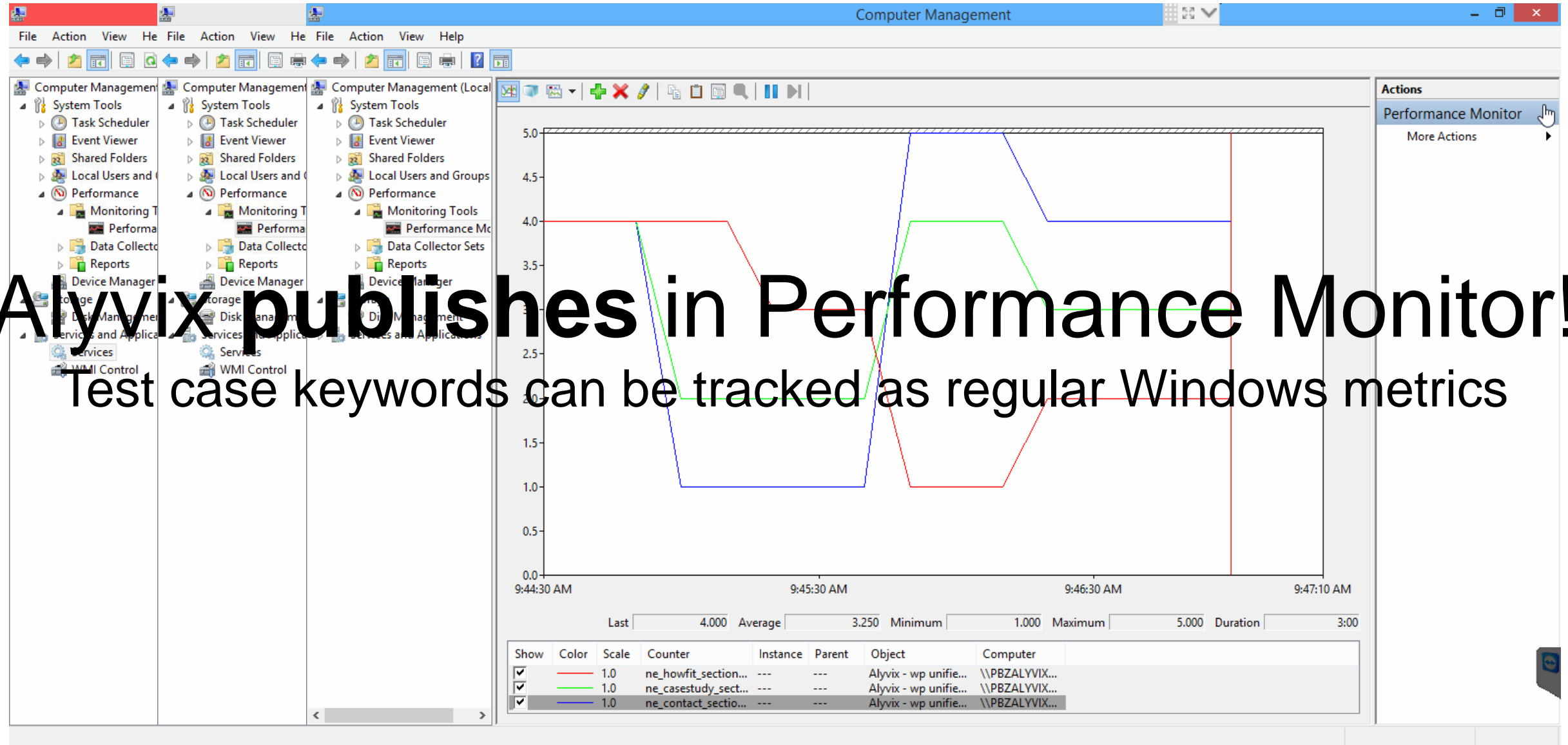


1. **NetEye** can schedule one or more test cases on the same Alyvix probe
2. **NSClient++** receives NRPE commands from NetEye on Alyvix probes
3. NSClient++ runs **Alyvix test case scripts** and returns back their outputs
4. **Alyvix test case performances** are collected and visualized in NetEye





End user experience monitoring
of business-critical transactions through
applications in the **cloud** or **on-premises**



Alyvix publishes in Performance Monitor!
 Test case keywords can be tracked as regular Windows metrics

Alyvix 2.3 Carnera | RELEASED: browse alyvix.com!



- Store performances in a local **SQLite database**
- Publish performances in **Windows Performance Monitor**
- **'Wait disappearance'** as a detection mode for Finders
- **Customizable frequencies** of frame grabber, object detector, interaction
- **UX, reports** and NetEye **integration improvements**

alyvix 2.4 under dev | December 2016

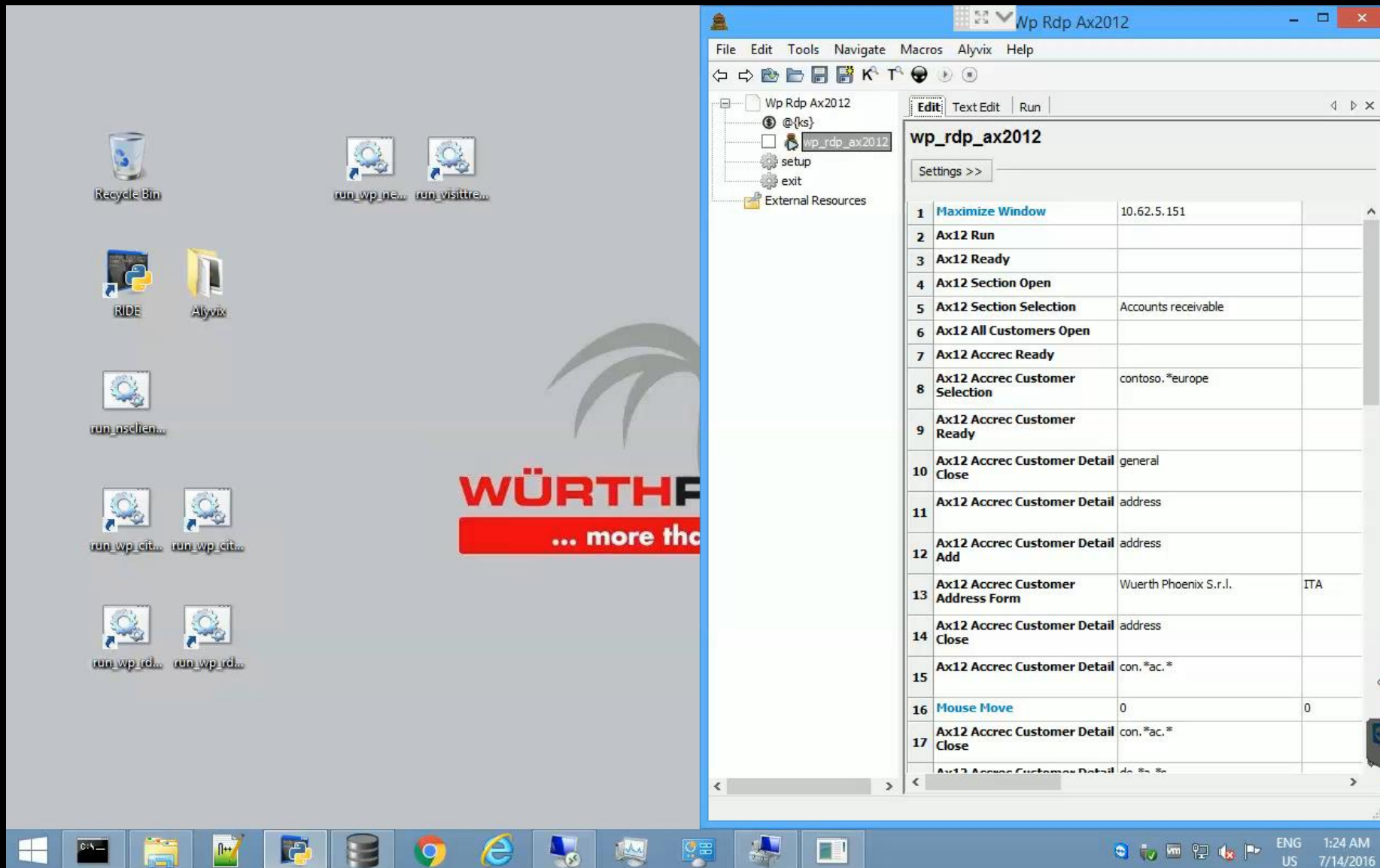


- **Interaction Selection, Hold'n'Release, Multiple Clicks, customizable exit code**
- **Report improvements:** keyword multiple use, Interaction Selection points, Object Finder .gif
- Performance **measurement system improvements** for 'Wait' and 'Wait disappear' modes
- **UX** and NetEye **integration improvements**
- ***Background Mode*** for lock and multiple sessions: *working in progress!*

Demo of Alyvix

Test case on MS Dynamics AX 2012
monitored by NetEye

Alyvix testcase



The screenshot shows a Windows desktop environment. On the desktop, there are several icons: Recycle Bin, RIDE, Alyx, and several 'run_wp_*' shortcuts. A large 'WÜRTHPHOENIX ... more than software' logo is visible in the background. An application window titled 'Wp Rdp Ax2012' is open, displaying a menu bar (File, Edit, Tools, Navigate, Macros, Alyx, Help) and a table of actions.

wp_rdp_ax2012			
Settings >>			
1	Maximize Window	10.62.5.151	
2	Ax12 Run		
3	Ax12 Ready		
4	Ax12 Section Open		
5	Ax12 Section Selection	Accounts receivable	
6	Ax12 All Customers Open		
7	Ax12 Accrec Ready		
8	Ax12 Accrec Customer Selection	contoso.*europe	
9	Ax12 Accrec Customer Ready		
10	Ax12 Accrec Customer Detail Close	general	
11	Ax12 Accrec Customer Detail	address	
12	Ax12 Accrec Customer Detail Add	address	
13	Ax12 Accrec Customer Address Form	Wuerth Phoenix S.r.l.	ITA
14	Ax12 Accrec Customer Detail Close	address	
15	Ax12 Accrec Customer Detail	con.*ac.*	
16	Mouse Move	0	0
17	Ax12 Accrec Customer Detail Close	con.*ac.*	
	Ax12 Accrec Customer Detail	da.*s.*	

Alyvix report

Wp Rdp Ax2012 Test Log x Würth Phoenix

file:///C:/alyvix_reports/wp_rdp_ax2012/log.html#s1

Test Execution Log

REPORT

<ul style="list-style-type: none"> SUITE Wp Rdp Ax2012 <ul style="list-style-type: none"> Full Name: Wp Rdp Ax2012 Source: C:\alyvix_testcases\wp_rdp_ax2012.robot Start / End / Elapsed: 20160822 15:27:58.008 / 20160822 15:33:13.212 / 00:05:15.204 Status: 1 critical test, 1 passed, 0 failed 1 test total, 1 passed, 0 failed + SETUP setup + TEARDOWN exit - TEST wp_rdp_ax2012 <ul style="list-style-type: none"> Full Name: Wp Rdp Ax2012.wp_rdp_ax2012 Start / End / Elapsed: 20160822 15:27:58.602 / 20160822 15:33:13.212 / 00:05:14.610 Status: PASS (critical) <ul style="list-style-type: none"> + KEYWORD alyvixib.Alyvix Config C:\\alyvix_logbooks\\config.xml + KEYWORD alyvixib.Maximize Window 10.62.5.151 + KEYWORD AlyvixProxywp_rdp_ax2012.Ax12 Run + KEYWORD AlyvixProxywp_rdp_ax2012.Ax12 Ready + KEYWORD AlyvixProxywp_rdp_ax2012.Ax12 Section Open + KEYWORD AlyvixProxywp_rdp_ax2012.Ax12 Section Selection Accounts receivable + KEYWORD AlyvixProxywp_rdp_ax2012.Ax12 All Customers Open + KEYWORD AlyvixProxywp_rdp_ax2012.Ax12 Accrec Ready + KEYWORD AlyvixProxywp_rdp_ax2012.Ax12 Accrec Customer Selection contoso.*europe + KEYWORD AlyvixProxywp_rdp_ax2012.Ax12 Accrec Customer Ready + KEYWORD AlyvixProxywp_rdp_ax2012.Ax12 Accrec Customer Detail Close general + KEYWORD AlyvixProxywp_rdp_ax2012.Ax12 Accrec Customer Detail address + KEYWORD AlyvixProxywp_rdp_ax2012.Ax12 Accrec Customer Detail Add address + KEYWORD AlyvixProxywp_rdp_ax2012.Ax12 Accrec Customer Address Form Wuerth Phoenix S.r.l., ITA, 39100, Via Kravogl, 4, Bolzano + KEYWORD AlyvixProxywp_rdp_ax2012.Ax12 Accrec Customer Detail Close address + KEYWORD AlyvixProxywp_rdp_ax2012.Ax12 Accrec Customer Detail con.*ac.* + KEYWORD alyvixib.Mouse Move 0, 0 + KEYWORD AlyvixProxywp_rdp_ax2012.Ax12 Accrec Customer Detail Close con.*ac.* 	<p>00:05:15.204</p> <p>00:00:00.000</p> <p>00:00:00.000</p> <p>00:05:14.610</p> <p>00:00:00.000</p> <p>00:00:00.313</p> <p>00:00:07.125</p> <p>00:00:15.265</p> <p>00:00:09.250</p> <p>00:00:08.157</p> <p>00:00:09.156</p> <p>00:00:04.859</p> <p>00:00:08.578</p> <p>00:00:04.828</p> <p>00:00:06.657</p> <p>00:00:10.062</p> <p>00:00:10.735</p> <p>00:00:29.828</p> <p>00:00:06.750</p> <p>00:00:10.125</p> <p>00:00:00.156</p> <p>00:00:06.953</p>
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Alyvix tracker

https://neteye.int.n-ergie/thruk/#cgi-bin/extinfo.cgi?type=2&host=v11005010&servi NetEyeALYVIX_CRM_User...

WÜRTHPHOENIX NetEye

Home

- NetEye Wiki
- OCS Inventory
- GLPI
- NeDi
- NetEye phpMyAdmin
- Documentation
- Panorama View

Monitoring

- Tactical Overview
- Service Detail
- Host Detail
- v11005010
- Host Groups
- Service Groups
- Problems
- Comments
- Downtime
- Status Map
- Nagios Status Map
- AIX
- ORACLE
- SLA2-Services
- SLA1-Services

Service Information

Last Updated: Mon Aug 22 14:41:16 CEST 2016
 Updated every 90 seconds
 Thruk 1.88-4_neteye1.2.10 - www.thruk.org
 Logged in as root

View Information For This Host
 View Status Detail For This Host
 View Alert History For This Service (Logs)
 View Trends For This Service
 View Availability Report For This Service
 View Notifications For This Service
 View Configuration For This Service
 View All 'ALYVIX_CRM_User' Services (As Performance Map)

Service

On Host

ALYVIX_CRM_User

Alyvix Controller (v11005010)

v11005010.n-ad.n-ergie

View PNP graphic

Service State Information

Current Status: OK (for 0d 0h 53m 30s)

Status Information: OK: all steps are ok (Log)
 OK: sap_login_ready time is 0.0 sec.
 OK: crm_login time is 0.0 sec.
 OK: find_21462183 time is 4.65200018883 sec.
 OK: find_40006569 time is 2.48600006104 sec.
 OK: find_41000771 time is 5.74800014496 sec.
 OK: find_11203600 time is 2.68899989128 sec.
 OK: find_40053187 time is 3.36999988556 sec.
 OK: find_43053372 time is 2.77900004387 sec.
 OK: find_45133703 time is 4.08899998665 sec.
 OK: crm_logout time is 1.91400003433 sec.

Performance Data: (show raw data)

Name	Value	Warning	Critical	Minimum
duration	346			0
sap_login_ready	0.0s	15.0	40.0	
crm_login	0.0s	15.0	40.0	
find_21462183	4.65200018883s	20.0	30.0	
find_40006569	2.48600006104s	20.0	30.0	

Service Actions

- Re-schedule next check of this service (Now)
- Submit passive check result for this service
- Send custom service notification
- Schedule downtime for this service
- Reset Modified Attributes

Service Commands

- Enable active checks of this service
- Stop accepting passive checks for this service
- Stop obsessing over this service
- Disable notifications for this service
- Disable event handler for this service
- Enable flap detection for this service

preferences

Extra Actions

Alyvix certifies the ongoing quality of IT services

IT ops teams can **modulate**
infrastructure **resources**

IT clients can **check**
their **SLA** with providers

Alyvix Training

Day 1 | Day 2

Alyvix basic principles

- Automation and monitoring of application transactions
 - Critical user transactions
 - Visual Synthetic Monitoring
 - Alyvix solution
- Graphic detection and interaction
 - One transaction, one Alyvix custom keyword, one performance
 - Alyvix custom keywords: types, components, regions of interest
 - Alyvix Object Finder: multitype components
 - Interaction modes: mouse clicks and keystrokes
- Performance measurement and outputs
 - Transaction thresholds and performance
 - Command line output and HTML report
 - Performance database and Windows Performance Monitor

Test case building

- Alyvix RIDE
 - Basic operations
 - Getting started
 - Install procedures ("HANDSON" Local Deployment)
 - Install Alyvix with Internet
 - Install Alyvix without Internet
 - Check Alyvix deployment ("HANDSON" Local Deployment)
 - check: conda list and Alyvix WPM Service
 - create: Alyvix folder structure
 - build: essential test case with RIDE
 - Test case editing: main and sub tables
- Alyvix basic keywords
 - Process keywords (e.g. run and kill)
 - Window keywords (e.g. wait, maximize and dose)
 - IO keywords (keyboard and mouse)
 - Performance keywords
- Alyvix custom keywords
 - Alyvix keyword and Finder selectors
 - Alyvix Finders
 - common settings
 - Alyvix Image Finder ("HANDSON" Static GUI)
 - Alyvix Rect Finder ("HANDSON" Static GUI)
 - Alyvix Text Finder ("HANDSON" Static GUI)
 - Alyvix Object Finder ("HANDSON" Static GUI)
- Debugging procedures
 - Report reading ("HANDSON" Static GUI)
 - Debug keywords ("HANDSON" Static GUI)
- Test case building: a real scenario ("HANDSON" Web Service)

Advanced topics

- Backup and distribute test cases
- Password encryption tool
- Test case logic
 - Design conditionals and switches
 - Test case building: a real scenario ("HANDSON" Notepad)
 - Design logs
 - Test case building: a real scenario ("HANDSON" Web Service)

Customer requested test case building ("HANDSON" Custom Application)

System monitoring integration

- Integration big picture
- Alyvix test case scripting to NRPE client (NSClient++)
- Nagios plugins: active and passive NRPE services
- Commands, services and hosts on monitoring system
- Report sharing, linking and cleaning
- Result interpretation: latency spikes and downtimes

Requirements

- 1 PC for each attendee with:
 - OS: Windows 7, 8, 10 or Server 2012, Server 2016, 64bit
 - mouse
- Internet has to be reachable without NTLM proxy
- Lecture room should have a beamer and a flipchart
- Python knowledge is not required

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2 Days of Training



2 Days of Consulting



- ✓ Alyvix is deployed
- ✓ First test cases on business-critical applications are running
- ✓ You are able to create new test cases independently

	STANDARD	PROFESSIONAL	ENTERPRISE*
Incidents			
Normal – response time	6 hours	4 hours	2 hours
Critical – response time	4 hours	2 hours	1 hour
Yearly incidents	5	15	45
No. of dedicated bug fixes	no	1	3
No. of supported standard test cases	3	10	unlimited
Distributed	no	3 nodes	unlimited
Multi monitoring backend server	1 server	2 servers	4 servers
Service Requests			
Response time	8 hours	4 hours	2 hours
No. of yearly available requests	5	15	45
Support of advanced test cases which include Python code	no	yes	yes
Support Channels			
Phone	no	yes	yes
E-Mail	yes	yes	yes
Remote via TeamViewer	no	yes	yes
No. of authorized contact persons	1	2	unlimited





**Eyes and hands like a human.
With a stopwatch.**

Thanks for your attention



alyvix.com

github.com/alyvix/alyvix