WINDOWSPROG USER GUIDE

Version 2.0

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2   INTRODUCTION

IWindowsProg is specially designed for iPhone, iPod touch and iPad to explore Database, Team Foundation Server Windows Machine and Visual Studio Projects IWindowsProg needs WindowsProg Bridge Server to be installed in Windows Machine to act as a bridge between iOS devices and Windows Applications. This user guide explains you about how to install and configure WindowsProg Bridge Server and gives you quick introduction about how to use iWindowsProg on iOS devices.

3   FEATURES

WindowsProg is the most powerful Windows, Database, TFS & Visual Studio client application for iOS devices.

This little ultimate application can help savvy computer users to do basic management of their windows computers remotely by doing simple few touches. Supports Active Directory, IIS, Windows Services, Processes, Event Logs, Hypervisor & ESX etc.

Are you a Microsoft Team Foundation Server User and ever wished about accessing the Project Information from IOS devices by touch. Then this is a perfect companion tool for you to remotely visualize and explore the Team Foundation Server Projects in an intuitive way.

Are you a MySQL, SQL Server, Oracle, PostgreSQL & DB2 database user and ever wished about exploring the database from IOS devices by touch. Then this is a perfect companion tool for you to remotely visualize and manage Databases in an intuitive way.

Are you a Microsoft Visual Studio User and ever wished about connecting to your Visual Studio instance from iOS device and explore the projects by touch, then this is a perfect companion tool for you to remotely visualize and explore Visual Studio Projects.

IWindowsProg uses a Bridge Server installed in Windows Machine to process the request made by iOS devices. The Bridge Server is the one stop communication point for Windows, Team Foundation Server and Database Servers.

The following list explains the features available in iWindowsProg

3.1   WINDOWS

a.   Basic Management of Windows Desktops and Servers.
b.   Manage the state of Windows Services.
c.   Visualize running processes.
d.   Explore Event Logs and analyze the issues.
e.   Administer the state of IIS7 Application Pools, Site & Applications.
f.   Explore Active Directory Users and Groups.
g.   Unlock, Enable/Disable Active Directory User.
h.   Reset the password of Active Directory User.
i.   Add/Remove Active Directory users to Groups.
j.   Create/Delete Active Directory User.
k.   Shutdown and Restart Active Directory Computers.
l.   Manage the power state of Windows Hypervisor Virtual Machines.
m.   Manage the power state of VMware ESX virtual machines.

3.2   TEAM FOUNDATION SERVER

a.   Visualize Team Foundation Server Objects.
b.   Query/Add/Edit/View Work Items.
c.   View Build Definition and its History.
d.   Queue Builds and Stop Builds.
e.   Details on Build Work Items and Change Sets.
f.   Visualize Source Control Tree for Collections.
g.   Explore and Query Source Control Item History.
h.   Information about Workspaces and Mapping.
i.   Pending Changes Information.
j.   Shelve Set Information.
k.   Edit Source Control items with Checkout and Check-in.
l.   Unlock locked items in the Source Control.
m.   Visualize Labels applied in Source Control.
n.   Powerful Query and Sorting for all Objects.
o.   Manage/Visualize any number of Team Foundation Servers.
p.   Start and Stop the Builds.
q.   Explore & Query Collections, Workspaces, Projects, Queries, Work Items, Pending Changes, Labels Builds, Branches, Source Control, Shelve Sets, Users, Groups and Change Sets.

3.3   DATABASE

a.   Connect to MySql, Sql Server, Oracle, PostgreSql, DB2, MongoDB & Access Databases.
b.   Visualize Database Objects.
c.   Immediate help on Database Objects.
d.   Script Database Objects.
e.   Search Database Objects.
f.   Administer Database by scripting.
g.   Edit Scripts and execute the same.
h.   Send any kind of Query and browse the results in table.
i.   Email Scripts and Query Results instantly.
j.   Asynchronous Query Execution.
k.   Parallel Query Execution.
l.   Manage any number of Databases.
m.   Explore Logs.
n.   Agent Management.
o.   Simple GUI Table designer for MySQL, SQL Server & Oracle.

3.4   VISUAL STUDIO CLIENT

a)   Visualize & Explore Visual Studio Projects.
b)   Add/Edit/Rename/Delete Visual Studio Projects. (*)
c)   Add/Edit/Rename/Delete Folders.
d)   Add/Edit/Rename/Delete Project Items. (*)
e)   Build from iOS device.
f)   Choose Build Configuration.

g) Error Window Display.
h) Source Code Editor/Viewer.
i) Run MS Unit tests and Visualize the results.
j) Explore/Reflect/Decompile assemblies using Object Browser.
k) Support for Visual Studio 2010, 2012 Pro and above only.
   (* You can add only items which does not require user input)

4   WINDOWSPROG BRIDGE SERVER

Make sure you have already downloaded WindowsProg Bridge Server before following this guide. If you have not already downloaded please head over to http://makeprog.com and download WindowsProg Bridge Server. When you have completed the order request to download you should have received the email with License Key file from MakeProg Support. Keep it in an accessible location since you require the license key file to complete the installation.

4.1   OPERATING SYSTEM REQUIREMENTS

WindowsProg Bridge Server can be installed on following windows operating systems. WindowsProg bridge server comes with 32 & 64 bit installation kits. It is recommended to use 64bit installation kit on 64 bit Operating Systems.

- ❖ Windows 7
- ❖ Windows 8
- ❖ Windows 10
- ❖ Windows Server 2008 R2
- ❖ Windows Server 2012
- ❖ Windows Server 2016
- ❖ Windows Server 2019

4.2   SOFTWARE REQUIREMENTS

Before installing WindowsProg Bridge Server please make sure that the following components have been installed.

4.2.1   BASIC COMPONENTS

The following basic components are mandatory requirement for WindowsProg Bridge Server.

a. .Net Framework 4.7.2

4.2.2   DB2 SUPPORT

If you would like to access DB2 using iWindowsProg you need to install the following component.

a. IBM Data Server Runtime Client

4.2.3   MICROSOFT ACCESS SUPPORT

If you would like to access Microsoft Access Database using iWindowsProg you need to install the following component.

a)   Microsoft Access 2003 , 2007, 2010 or 2013.

b)   Microsoft Access Database Engine 2010 Redistributable

4.2.4   ESX SUPPORT

a.   VIX API 1.12

4.2.5   VISUAL STUDIO CLIENT SUPPORT

If you would like to access Visual Studio instance running in Windows you need the following application to be installed.

a)   Visual Studio 2010, 2012, 2013 Professional and above.

4.3   INSTALLATION

Run the setup application corresponding to your architecture on a Windows Machine where you would like to have WindowsProg Bridge Server and simply follow the basic instructions to install the application. Using the advanced setup you can choose to install only the required components. The setup installs a WindowsProg Bridge Server Windows Service and a BackOffice application. Please open Windows Service MMC and make sure have the WindowsProg Bridge Service is installed and running. . You can also manage the status of WindowsProg Bridge Server Service using BackOffice Application. You will also find the shortcut for the BackOffice Application in the start menu in the name of WindowsProg BackOffice. This back office application helps you to install license and manage iWindowsProg users and their access to the applications.

<div align="center">

WindowsProg Bridge Server can be installed as standalone application on separate Windows Machine and it is not necessary to install WindowsProg Bridge Server in Database, Team Foundation Server or Windows Machine you would like to manage

</div>

4.3.1   VISUAL STUDIO BRIDGE EXTENSION INSTALLATION

If you would like to access Visual Studio instance running in Windows you need to install the WindowsProg Bridge Visual Studio extension in the machine where Visual Studio is running. By default when you are installing WindowsProg Bridge Server, Visual Studio Bridge extension is not installed. Download Visual Studio Bridge Extension from Visual Studio Bridge Extension , run the setup in the machine where Visual Studio is installed (the instance which you would like to access from iOS device). Once the installation is completed start Visual Studio and you can locate the WindowsProg Bridge option under Tools Menu. Select the WindowsProg Bridge option and make sure the bridge server is running and listening at the port by default 12300. You can alter the port to your choice. To successfully connect to this instance you should open the port specified (default 12300) in the firewall.

4.3.2   LICENSE INSTALLATION & REGISTRATION

When you have placed a request to download the WindowsProg Bridge Server from http://makeprog.com you should have a received an email with license key file WindowsProg.License.

From the start menu, start WindowsProg BackOffice application and create an iWindowsProg user and login as the same user. From the BackOffice menu select license and Register your details with the license file to activate the WindowsProg Bridge Server.

4.3.3   FIREWALL REQUIREMENTS

iOS devices communicate with WindowsProg Bridge Server via port 12345 using http protocol by default. So it is necessary to open the port 12345 in the Windows Firewall. It is possible to change the default port 12345 to the port of your choice. To do that, from the start menu, Start WindowsProg BackOffice application and go to the Configuration screen by selecting BackOffice->Config menu and specify the port of your choice and save the changes.

 Alternatively locate the file WindowsProg.Bridge.exe.config in bin folder of installation directory and open with your choice of text editor and modify the port in the key the port value of your choice and save the config file.

  <appSettings>

   <add key="ServicePort" value="**12345**" />

After changing the port value it is necessary to restart the WindowsProg Bridge Server Windows Service. You can do this in BackOffice -> Bridge Server option in BackOffice application or in the Windows Services Management Console.

When you modified the port make sure you have opened the same port in the firewall.

4.3.4   USING HTTPS

It is possible to use HTTPS with WindowsProg Bridge Server to secure the communication between iOS devices and WindowsProg Bridge Server. To use https it is necessary to configure the Service Port with SSL certificate. For more information on how to do that please refer to How to: Configure a Port with an SSL certificate.

Once the configuration of SSL Certificate is done, SSL option has to be enabled for WindowsProg Bridge Server. To do that, from the start menu, Start WindowsProg BackOffice application and go to the Configuration screen by selecting BackOffice->Config menu enable SSL, and save the changes.

Alternatively locate the file WindowsProg.Bridge.exe.config in bin folder of installation directory and open with your choice of text editor and modify the key value SSL to true.

  <appSettings>

   <add key="SSL" value="**true**" />

After enabling the SSL, it is necessary to restart the WindowsProg Bridge Server Windows Service. You can do this in BackOffice -> Bridge Server option in BackOffice application or in the Windows Services Management Console. Now iOS devices communicate with WindowsProg Bridge Server securely using SSL certificate.

4.3.5   LEAST PRIVILEGED SERVICE USER

By default WindowsProg Bridge Server service uses local system account as logon user. You can change it to a user with least privilege. When you change the service user and restart the service please verify error log file. If you find a message saying access denied it is necessary to reserve the WindowsProg Bridge Server http or https Ports to the

service user. If you are running as a local system user, the user should have access for listening http request on ports. But the least privileged user may not have access for listening http request. So it is necessary to grant access for the ports. For more information on granting access to ports please see Configuring HTTP and HTTPS.   By default you need to give access to port 12345. Sample command.

 netsh http add urlacl url=http://+: 12345 / user=DOMAIN\user

For https please replace "http" with https

4.3.6   CONFIGURABLE OPTIONS

In the configuration file WindowsProg.Bridge.exe.config found in bin folder of installation directory you can configure settings specific to features. Here are the list and the explanation for the same. You can modify these settings using the WindowsProg BackOffice application.

❖ **<add key="LogError" value="true"/>**
    This key enable/disable the error logging. By default the errors are logged to log folder in the installation directory. If you specify false for this key the error logging will be disabled.
❖ **<add key="db2lookPath" value="C:\Program Files\IBM\SQLLIB\BIN" />**
    This key specifies where the db2look.exe is found in the directory. This is used for generating scripts for DB2 objects.
❖ **<add key="WorkSpacePath" value="c:\temp"></add>**
    In iWindowsProg Team Foundation Server features you have the option for checking out files from source control for editing and checking back in. This is done by creating a temporary workspace in WindowsProg Bridge Server machine for the iOS devices. The temporary path used for creating workspace can be modified by using this settings.

4.3.7   LOGS

The WindowsProg Bridge Server logs the errors to the folder log in installation directory. If you are contacting support please include the log files in this directory to isolate your issue.

5   IWINDOWSPROG QUICK START GUIDE

Before start reading this guide, make sure you have downloaded the iWindowsProg application from iTunes appstore and have configured the WindowsProg Bridge Server.

5.1   ICON REFERENCE

Here is the list of icons used in iWindowsProg and their explanation.

	Take to Home Screen		**Pause**
	Add Record		**Restart**
	Edit Record		**Open Query Screen**
	Delete Record		**Generate Script**

	Refresh Screen		Mail
	Go to First Page		Specify Date
	Go to Previous Page		References
	Go to Next Page		Dependencies
	Go to Last Page		Check-in
	Open Details screen		Check Out
	Filter Data		History
	Sort Data		Work Item
	Search Data		Undo
	Help		Unlock
	Start		Settings
	Stop		InApp Purchase
	Suspend		Touch on this to drill down
	Quick start guide		Help Videos
	Change to tiles/table view		Show/Hide Solution Explorer

5.2   ADDING WINDOWSPROG BRIDGE SERVER

The first step in iWindowsProg is to add the Bridge Servers to the Home Screen. Here is the sample screen with the details.

After adding the Bridge Server in the Bridge List screen you can touch the Disclosure > Icon to test the bridge server to make sure that you are able to reach the bridge server. The Bridge Server is the IP name or DNS name of the machine where the WindowsProg Bridge Server is installed. The Bridge Server should be reachable from you iOS device either with IP address or DNS name. If you are getting timeout error make sure you have opened the WindowsProg Bridge Server Port in the firewall.

5.3   PREFERENCES

You can set the preferences for iWindowsProg using the by touching the gear icon in the Bridge Server Screen.

Background	Background to be used in the user interface
Image Theme	Image theme to be used in the user interface.

Bar Theme	Theme for Navigation Bar and Toolbar.
Gradient	Use Gradient in user interface.
iOS7 Style	Do not use borders for buttons
Tiles	No. of tiles that can be displayed in a page when there is paging for data. If you set this to 0 all the data will be displayed in single page.
Rows	No. of rows that can be displayed in a page when there is paging for data. If you set this to 0 all the data will be displayed in single page.
Auto fit Font	When you enable this in tiles the font size will be automatically changed to fit the content.
SSL Validation	Validate SSL certificate or not.
Status bar	If you disable it the status bar will be hidden
Incoming Port	Default port for listening. WindowsProg bridge push notifications to this port.
Device language	If disabled English will be used as default language for the application
Debug	Enable this to collect diagnostics info.

5.4   ADDING MYSQL SERVER

MYSQL server can be added to MYSQL server list as shown in the picture.

The Name is used for display purpose and it is not used in connecting MYSQL Server. The Server name is the MySQL Server IP Address or DNS Name that should be reachable by WindowsProg Bridge Server Machine.

5.5   ADDING MICROSOFT SQL SERVER

SQL Server can be added to SQL Server list as shown below.

The Name is used for display purpose and it is not used in connecting SQL Server. The Data source is the SQL Server Instance Name that should be reachable by WindowsProg Bridge Server Machine. If you are using Windows Authentication enable Windows Authentication.

5.6   ADDING ORACLE SERVER

Oracle Database can be added Oracle Server list as shown below.

The Name is used for display purpose and it is not used in connecting Oracle. The Data Source can be specified in any one of the following three types.

❖ Just the TNS Name as defined in ORACLE_HOME\NETWORK\ADMIN directory.
❖ Complete TNS Entry as shown below.
    <addressname> =
    (DESCRIPTION =
     (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP)(Host = <hostname>)(Port = <port>))
)
    (CONNECT_DATA =
     (SERVICE_NAME = <sid>)
)
)
❖ Easy Connect String.
    //host:port/service_name

If you are using Windows Authentication enable Windows Authentication.

5.6.1   TROUBLESHOOTING

If you are facing the error "the provider is not compatible with the version of oracle client" follow the steps below to solve the issue.

I.   Locate the Oracle.DataAccess.dll in oracle client / server directory.

II.   Go the properties of the file and click on details and note down the product version for example 2.112.0 is the default version installed with 11 r2. It is recommended to upgrade to latest odp.net from oracle site.

III.   Go to the bin folder of the WindowsProg Bridge Server Installation directory.

IV.   Open the file WindowsProg.Bridge.exe.config in notepad.

V.   Copy the below text in bold to your version and replace the newVersion(the text in red) with version you found in step 1.

```
<?xml version="1.0"?>

<configuration>

 <appSettings>

 </appSettings>

 <runtime>

 <assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">

   <dependentAssembly>

    <assemblyIdentity name="Oracle.DataAccess"  publicKeyToken="89b483f429c47342"/>

    <bindingRedirect oldVersion="4.112.2.0" newVersion="2.112.1.0" />

   </dependentAssembly>

 </assemblyBinding>

 </runtime>

</configuration>
```

VI.   Restart the WindowsProg Bridge Server Windows Service using BackOffice Application or in service manager mmc. Try connecting from IOS application again.

5.7   ADDING POSTGRESQL SERVER

PostgreSql server can be added to PostgreSql server list as shown in the picture.

The Name is used for display purpose and it is not used in connecting PostgreSql Server. The Server name is the PostgreSql Server IP Address or DNS Name that should be reachable by WindowsProg Bridge Server Machine.

5.7.1   PG_GET_TABLEDEF

If you are connecting to PostgreSQL Database version greater than 8.3 it is necessary to create the following ps_get_tabledef function in the database. Copy following code into pgAdmin Sql Window and create the function.

```
CREATE OR REPLACE Function pg_catalog. pg_get_tabledef(text) RETURNS text
AS
$$
  DECLARE
    tabledef TEXT;
    dotpos integer;
    tablename text;
    schemaname text;
    prevcol text;
    coltype text;
    notnull1 boolean;
```

```
   rec record;
   oidcheck boolean;
 BEGIN
 dotpos:=strpos($1,'.');
 if dotpos = 0 then
   schemaname:='public';
   tablename:=substr($1,dotpos+1);
 else
   schemaname:=substr($1,1,dotpos-1);
   tablename:=substr($1,dotpos+1);
 end if;
 select relhasoids into oidcheck from pg_class,pg_namespace where
pg_class.relnamespace=pg_namespace.oid and pg_namespace.nspname=schemaname and
pg_class.relname=tablename and pg_class.relkind='r';
  if not found then
   tabledef:='Table Does not exists!';
   return tabledef;
  end if;
 tabledef:= 'CREATE TABLE '|| schemaname||'.'||tablename;
  for rec in SELECT a.attname as columnname ,pg_catalog.format_type(a.atttypid, a.atttypmod) as
coltype, (SELECT substring(pg_catalog.pg_get_expr(d.adbin, d.adrelid) for 128) FROM
pg_catalog.pg_attrdef d WHERE d.adrelid = a.attrelid AND d.adnum = a.attnum AND
a.atthasdef),a.attnotnull as notnull, a.attnum FROM pg_catalog.pg_attribute a WHERE a.attrelid =
(select pg_class.oid from pg_class,pg_namespace where relname=tablename and
pg_class.relnamespace=pg_namespace.oid and pg_namespace.nspname=schemaname) AND
a.attnum > 0 AND NOT a.attisdropped ORDER BY a.attnum
 loop
    if prevcol is null  then
 tabledef:=tabledef||' (';
     prevcol:=rec.columnname;
     coltype:=rec.coltype;
     notnull1:=rec.notnull;
    elsif notnull1 then
     tabledef:=tabledef||' '||E'\n'||prevcol||' '||coltype||' NOT NULL ,';
     prevcol:=rec.columnname;
     coltype:=rec.coltype;
     notnull1:=rec.notnull;
    else
     tabledef:=tabledef||' '||E'\n'||prevcol||' '||coltype||' ,';
     prevcol:=rec.columnname;
     coltype:=rec.coltype;
     notnull1:=rec.notnull;
    end if;
  end loop;
   if oidcheck = true and notnull1 = true then
    tabledef:=tabledef||E'\n'||prevcol||' '||coltype||' NOT NULL ) WITH OIDS;';
   elsif oidcheck = true and notnull1 = false then
    tabledef:=tabledef||E'\n'||prevcol||' '||coltype||' NOT NULL ) WITH OIDS;';
   elsif oidcheck=false and notnull1=true then
    tabledef:=tabledef||E'\n'|| prevcol||' '||coltype||' NOT NULL ) WITHOUT OIDS;';
   else
    tabledef:=tabledef||E'\n'||prevcol||' '||coltype||' ) WITHOUT OIDS;';
```

```
    end if;

  return tabledef;
  end;
$$ language plpgsql;
```

5.8   ADDING DB2 SERVER

DB2 server can be added to DB2 server list as shown in the picture.

The Name is used for display purpose and it is not used in connecting DB2 Server. The Server name is the DB2 Server IP Address or DNS Name that should be reachable by WindowsProg Bridge Server Machine.

5.8.1   TROUBLESHOOTING

❖ **File not found (msg directory).**
If you getting files not found in the msg directory copy C:\Program Files\IBM\SQLLIB\msg to the root of WindowsProg Bridge Server installation directory.

❖ **Script Generation Failure**
If you have problem in script generation please verify the db2look path in Config Screen of BackOffice Application or in .config file in the installation directory. If the path is correct make sure that the account running the WindowsProg Bridge service has access for generating the script using db2look.

❖ **Expected status Code (200-299), .Net Data Provider Initialization error**
If you get the above mentioned error, please do the following

a). Copy C:\Program Files\IBM\SQLLIB\BIN\db2app.dll, db2app64.dll to WindowsProg Bridge Server installation bin directory.

b) Copy C:\Program Files\IBM\SQLLIB\BIN\netf40\IBM.Data.DB2.dll to WindowsProg Bridge Server installation bin directory.

5.9   ADDING MICROSOFT ACCESS DATABASE

Microsoft Access Database can be added to Access Database list as shown in the picture

The name is for display purpose only and it is not used in connecting Access Database. In the database field specify the remote path of the database. If you have encrypted the database specify the password also.

5.10   ADDING MONGODB DATABASE

MongoDB can be added to MongoDB Server list as shown in the picture

Enable the cluster option when you want to use the +srv in the connection string that will DNS seed list. For example when you want to connect to Atlas cluster enable this.

5.11   ADDING WINDOWS MACHINE

Windows Machine can be added Windows Machine list as shown in the picture.

The Name is used for display purpose and it is not used in connecting Windows Machine. The Machine name is the Windows PC/Server IP Address or DNS Name that should be reachable by WindowsProg Bridge Server Machine. In the login info if you do not have the domain name use the machine name as domain.

5.12   ADDING TEAM FOUNDATION SERVER

Team Foundation Server can be added to Team Foundation Server list as shown in the picture.

The Name is used for display purpose and it is not used in connecting Team Foundation Server. The TFS URL is the Team Foundation Server URL that should be reachable by WindowsProg Bridge Server machine.

5.12.1   CONNECTING TO DEV.AZURE.COM (TEAM FOUNDATION SERVICE)

With iWindowsProg you can connect to tfs.visualstudio.com. To achieve this you need to follow the steps explained below.

a)   Enable alternate credential in dev.azure.com
b)   Now you can connect to dev.azure.com using alternate credential you have defined in iWindowsProg.

5.12.2   KNOWN ISSUES

a)   It is advised to use queries for filtering the work items. If you have lots of work items and if you use Work Item option in the Projects menu, it may take considerable amount of time to query all the work items and you may receive timeout error and WindowsProg Bridge Server will consume lots of memory. So it is suggested to use Queries to filter the work items.

5.13   ADDING VISUAL STUDIO INSTANCE

You can add the Visual Studio instance running in Windows in iWindowsProg and explore the Visual Studio projects by touch.

The name is used for display purpose only. In the server you can either specify the DNS name or IP of the PC which is running Visual Studio instance. Before connecting, please make sure you have installed the WindowsProg Bridge Server and WindowsProg Visual Studio Bridge extension. The dns name or IP address should be reachable from iOS device.

5.13.1   TROUBLESHOOTING

a) Make sure you have installed WindowsProg Bridge Server and WindowsProg Visual Studio Bridge extension.
b) Visual Studio 2012 should be running with WindowsProg Visual Studio bridge enabled.
c) Visual Studio should run as administrator.
d) If you are getting timeout please make sure that you have opened the port used by Visual Studio Bridge Extension in the firewall.

5.13.2 KNOWN ISSUES

a) To receive build output window messages, iWindowsProg and WindowsProg Bridge Server IPS should be either public or private. If WindowsProg Bridge Server has public IP and iWindowsProg has private IP Build Output Window messages can't be pushed to iWindowsProg at present.